HDTV Satellite Receiver

CX10/VX10

User Manual

Version: 14.05.2013 - English

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ENJOY YOUR ENTERTAINMENT

Preface

Dear customer!

Thank you for purchasing a smart CX10/VX10 HDTV satellite receiver. This manual explains how to

- install,
- connect,
- customize,
- operate,
- clean or depollute

the receiver. Please read the manual carefully before operating the unit. We hope you enjoy using your smart receiver.

Your

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1 General Advice

1.1 Use of this Manual

- This manual is valid for both, the smart HDTV satellite receivers smart CX10 and smart VX10. Both units differ only in the WLAN compatibility of the VX10. Therefore, due to simpleness below we mention only the combination CX10/VX10. Differences are pointed out if necessary.
- Read the manual completely before starting up the receiver the first time.
- Pay attention to all warnings and notes in the manual.
- Consider the manual as a part of the product and preserve it well accessible.
- If passing the set to third party, do not forget to attach this manual.
- In the support area of our website www.smart-electronic.de you can download the up-to-date version of the manual, e. g. if the original manual is lost.
- After purchasing the receiver mainly the software will still be enhanced. Therefore, it may be possible that there are differences in e. g. operating instructions or illustrations between the manual and the reality.
- For many menu items there is detailed help shown as part of the OSD. In these cases there will not be any additional explanation in the manual.

1.2 Symbols and Illustration Agreements

Illustration	Meaning
	WARNING Hazard of electric shock with possibly serious bodily harm effect.
	CAUTION Warning of material damage.

Illustration	Meaning
	Advice Additional information and hints.
	You are asked to do something.
1. 2.	Act in the described order
●	enumeration
italic	various possibilities of an adjustable value are written in *italics*
bold	menu windows, menu items and key names are printed in **bold**

2 Product Description

The smart CX10 hybrid receiver uses up-to-date HDTV chip technology. It offers satellite reception and a LAN interface for the connection to your home network and internet access.

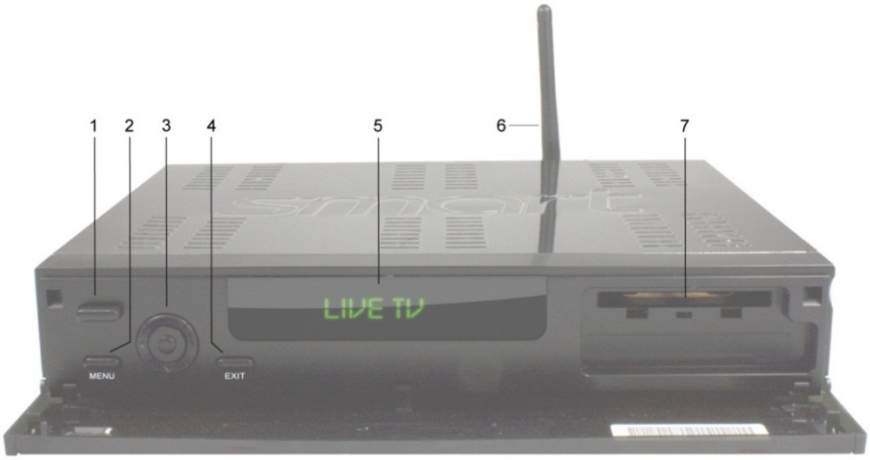
The smart VX10 offers the same features and additionally WLAN compatibility.

2.1 Scope of Delivery

- HDTV satellite receiver smartCX10/VX10.
- remote control (rc)
- 2 batteries (AAA) for the rc
- HDMI cable
- WLAN antenna (only VX10)
- HD+ smartcard (in the CA bay behind the front flap), HD+ info flyer
- user's manual

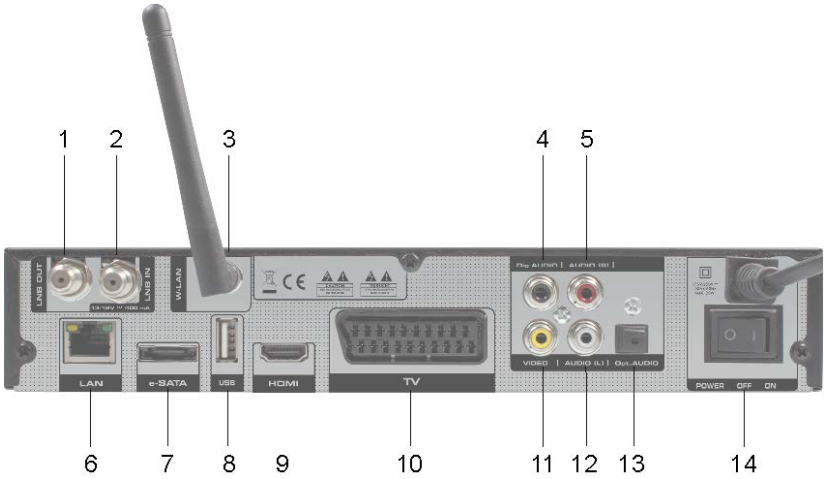
2.2 Receiver

2.2.1 Receiver Front (flap open)



No.	Description	
1	**STANDBY**	Switch standby / operating mode
2	**MENU**	Display menu or exit menu
3	**◀ / VOL-**	Decrease volume / to the left in the menu
	▶ / VOL+	Increase volume / to the right in the menu
	OK	Show channel list / confirm menu item
	▼ / CH-	Channel Down / down in the menu
	▲ / CH+	Channel Up / up in the menu
4	**EXIT**	Exit menu or menu item
5	**Display and LED**	Green LED = operational mode
6	**WLAN**	Antenna for wireless network (only VX10)
7	**CA**	Bay for smartcard

2.2.2 Rear Panel



No.	Description	
1	**LNB OUT**	SAT signal - loop through for additional receivers
2	**LNB IN**	Antenna connection
3	**WIFI**	WLAN antenna (only VX10)
4	**Digital Audio**	Digital audio out (SPDIF)
5	**AUDIO - R**	Analog audio right
6	**LAN/Ethernet**	Ethernet connector (home network / internet)
7	**SATA**	Serial ATA, data interface to connect an external data storage device (hard disk), eSATA
9	**USB**	USB data storage medium
9	**HDMI**[1]	Digital audio / video out
10	**TV**	Scart connection to a TV set
11	**Video**	Composite, analog TV video signal
12	**AUDIO L**	Analog audio left
13	**SPDIF**	Digital audio optical out (SPDIF)
14	**ON / OFF**	Mains switch

[1] High Definition Multimedia Interface, interface for the fully digital transmission of audio and video data.

2.3 Remote Control Unit

No.	Key	Description
1	⏻	Switches between operating mode and standby
2	**V-FORMAT**	Toggles video resolution
3	**0 - 9**	Program selection, alphanumeric input
4	**TV/R**	Switches between TV mode and Radio mode
5	**+/-**	Volume +/-

No.	Key	Description
6		Green function key
7		Red function key
8	**MENU**	Display main menu
9		Program Up / up in the menu
		Program Down / down in the menu
		Decrease volume / to the left in the menu
		Increase volume / to the right in the menu
	OK	Show channel list / confirm menu item
10	**INFO**	Shows information on the current program
11	**FAV**	Shows favorite program list
12		Fast forward and backward
13		Jump forward and backward
14	**USB**	Opens Personal Planner
15		Mute
16	**16:9**	Toggle video format
17	**AUDIO**	Change audio mode
18	**RECALL**	Switch back to the last viewed program
19	**+/-**	Program +/-
20		Yellow function key
21		Blue function key
22	**EXIT**	Exit menu or menu item
23	**BACK**	Back to the previous menu item
24	**EPG**	Opens electronic program guide (EPG)
25	**TXT**	Opens / close teletext
26		Starts direct record
27		Starts / pause playback
28		Stops record / playback

No.	Key	Description
29	**HELP**	Opens the smart support center (internet)
30	**PVR**[2]	Opens data storage menu

2.4 Save Energy

The CX10/VX10 receiver is equipped with special energy-saving electric and electronic components. Moreover, a well thought-out energy management will help you save energy.

The Save Energy standby mode will reduce the power consumption to less than 0,5 Watt (energy mode economic, see section 7.9.1, page 74)!

2.5 Warranty

The warranty for the HDTV Satellite Receiver smartCX10/VX10 complies with the legal regulations at the time of purchase.

3 Safety Instructions

3.1 Designated Use

The HDTV satellite receiver CX10/VX10 is intended for the reception of both, free to air and scrambled digital satellite programs (DVB-S/S2) in the private sector. It is designed exclusively for this purpose and may be used only for this.

Any other use is not considered as to be designated. We will not be liable for damage caused by any use contrary to the designated use.

[2] PVR = Personal Video Recorder, hard disk recorder for digital recording of audio and video

3.2 Hazards during designated use

CAUTION!

WARNUNG!

Possible malfunction or unit damage caused by moisture, wrong mains voltage and/or wrong mains frequency, lightning or mechanical overstraining.
Hazard of electric shock by contact with line voltage.

- Ensure that receiver and mains plug as well as the RCU do not come into contact with any moisture whatsoever.
- Connect the receiver to 175…250 V ~, 50/60 Hz only.
- During an electric storm or operational faults, pull the plug.
- Do not place any heavy objects on the receiver.
- Do not bend or squeeze the cable.
- Repairs on plug, cable or receiver may only be performed by qualified skilled personnel.

3.3 Grounding

The satellite antenna must be grounded properly. Note the relevant VDE[3] regulations[4].

smart recommends that the outdoor unit of the satellite system should be installed by a professional!

3.4 Installation Location

- Place the receiver on a solid flat surface.
- Protect receiver from moisture, heat, dust, dirt, etc.

[3] VDE = Verband der Elektrotechnik, Elektronik, Informationstechnik (German) = Association for Electrical, Electronic & Information Technologies
[4] DIN EN 60728-11 VDE 0855-1:2011-06: Cable networks for television signals, sound signals and interactive services, Part 11: Safety

➢ Ensure sufficient ventilation (do not cover the ventilation slots).

There may occur moisture condensation, if you move the receiver from a cold location to a warm location.

➢ Do not operate the receiver, but keep it switched off for several hours.

3.5 Proper Handling of Batteries

- Batteries must be kept away from children.
- Leaking batteries may cause damage to the environment and the remote control.

➢ Batteries must be disposed of in accordance with current legal regulations (see chapter Disposal, page°102).

3.6 Product Liability

We do not assume liability, if the designated protection of the unit is impaired, especially in these cases:

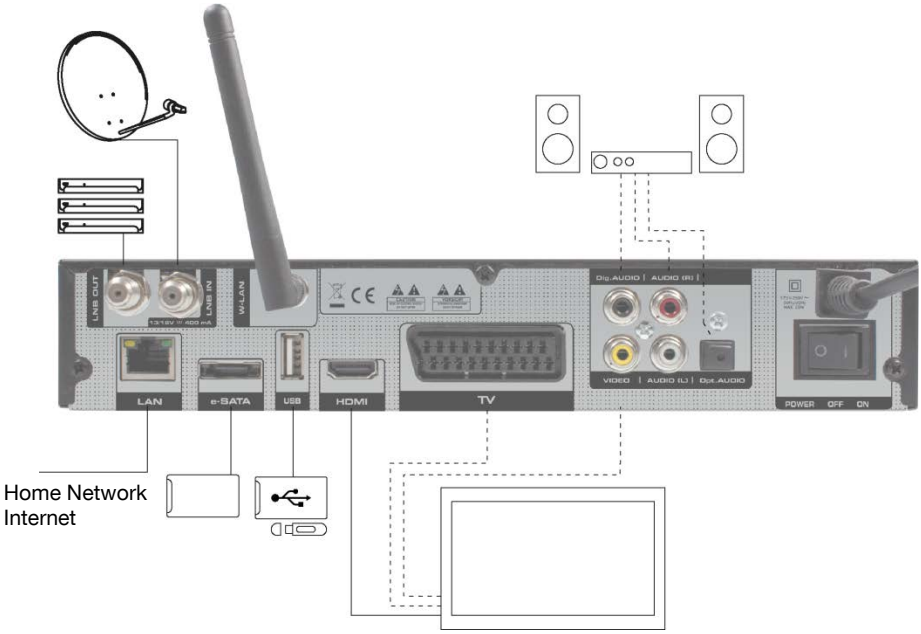
- The unit is not used according to the manual.
- The application range is not correct.
- The user makes unauthorized changes regarding the receiver hardware .

4 Connecting smart CX10/VX10

➢ Connect the receiver first to the antenna and then to all other devices, before plugging the mains plug into the socket.

➢ Pay also attention to the respective notes in the manuals of the other devices.

4.1 Connection Diagram



4.2 Connecting the Satellite System

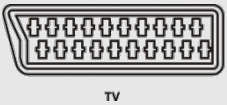
➢ Connect the cable of the satellite system to the **LNB IN** socket.

The satellite signal at the LNB IN connection is looped through the receiver and can be tapped at the LNB OUT connection, to connect, if desired, additional receivers.

If your receiver is in standby mode, you only can use loop through if you selected the energy mode economic (see section 7.9.1, page 74).

4.3 Connecting the TV Set

As shown in the connection diagram, there are various options to connect the smartCX10/VX10 and the TV set. It depends on the connectivity of your TV set which option is possible for you.

Is there a HDMI socket at the TV set?		
YES	**NO. Choose one of below possibilities.**	
		
➢ Connect TV set and re-ceiver with a HDMI cable.	➢ Connect TV set and receiver with a scart cable.	➢ Connect TV set and receiver with a single-pole composite video cinch cable and a double-pole stereo cinch cable.

➢ If your TV-Set has all these sockets, always choose the connection via HDMI cable.

Quality is best, if both, audio transmission and video transmission is digital.

4.4 Connecting a Home Theater System (optional)

In order to improve the sound quality, you can connect to your CX10/VX10 additionally to the TV set, a home theater system with surround sound or a stereo system. Once more, there are various options. It depends on the connectivity of your home theater system which option is possible for you.

a.

Your home theater system can loop through the HDMI signal, i. e. there is a HDMI socket to connect the receiver and a HDMI socket to connect the TV set.

➢ Connect the home theater system and the receiver with a HDMI cable and connect the home theater system with your TV set with another HDMI cable.

b.

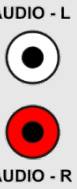
Your home theater system can process digital audio data – there is a digital audio socket.

➢ Connect your home theater system and your receiver with an optical cable or a single-pole cinch cable.

c.

Your home theater system cannot process digital audio data – there is no digital audio socket.

➢ Connect your home theater system and your receiver with a double-pole cinch cable (stereo).



➢ If your home theater system (or stereo system) has all these sockets, always choose the connection via HDMI cable.

Quality is best, if both, audio transmission and video transmission is digital.

4.5 Connecting a Data Storage Device (optional)

➢ Connect the receiver via the USB socket or the eSATA socket to a data storage device (USB stick or hard disk with USB or eSATA socket) with a suitable cable. Then you can

- store video recordings (see chapter 6, page 49) or
- access various media files (see section 7.7, page 65).

An eSATA device has always to be connected before you switch on the receiver. Only then, the storage device will be detected properly by the receiver.

Attention: The eSATA socket at the receiver rear panel does not provide power. Therefore, only use eSATA devices with own power supply!

4.6 Connecting a Home Network (optional)

➢ In order to connect the receiver to the internet (www) or to a home network,

- connect the receiver's LAN socket with a network cable to the appropriate interface of your home network or
- screw the enclosed WLAN antenna on the rear panel and configure a wireless connection to your home network (only smart VX10).

➢ How to configure a wireless connection or how to access the internet or your home network via cable connection is described in section 7.9.6 on page81.

➢ Plug mains plug into socket, when all devices have been properly connected to the receiver:

4.7 Inserting the Batteries of the RCU

This is the procedure to insert new RCU batteries or to replace empty batteries:

➢ Open the battery cover at the bottom of the RCU.

➢ Insert two batteries 1.5 V (Type: AAA).

Take care of the right polarity!

➢ Replace batteries when the range of the remote control is decreasing or when the receiver no longer reacts to all commands.

➢ When not used for prolonged periods of time, batteries may leak. Remove batteries from the remote control if it is not used for long periods of time (> 1.5 years).

➢ When replacing batteries, always replace all batteries.

5 Basic Operation

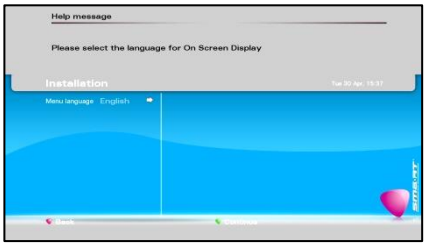
This chapter describes the necessary steps to use easily the radio and television programs broadcasted via satellite.

5.1 Switching on the Receiver

1. Ensure that you chose the right AV input at your TV set (i. e. that the receiver signal will be displayed).
2. Ensure that you chose the right audio input at your home theater or stereo system.
3. Switch on all connected devices.
4. Switch on the receiver with the mains switch on the rear panel (I, ON).

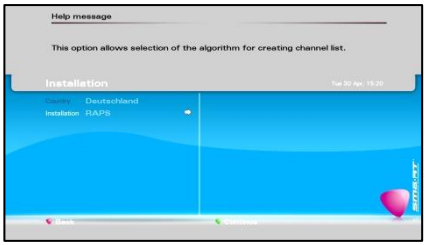
   The receiver boots up. For a short time the smart welcome screen is displayed, then the first installation window. You see “WELCOME” in the receiver display. Now, you can choose the **menu language.**

5. If you don’t want to take over the default value Deutsch for the menu language, proceed like this:



   – Press the key ▶, in order to go to the options.
   – Choose the desired language with the keys ▲ and ▼.
   – Press **OK**, in order to confirm the chosen language.
   – Press the **green function key**, in order to go to the next installation window.

6. In the second installation window you can select whether you want to install the receiver with or without smart RAPS[5].



7. Press the key ▶, in order to go to the options.
8. Select the desired installation with the keys ▲ and ▼. Possible are:
   - RAPS
   - Automatic (HD+)
   - Satellite Search
   - Predefined List

[5] RAPS = Receiver Automatic Programming System, see below for details

5.2 Installation with RAPS

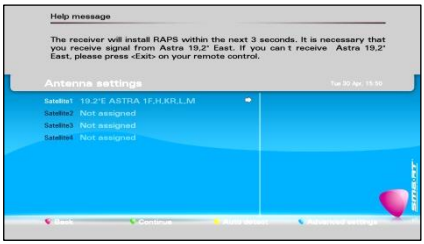
Your CX10/VX10 is equipped with RAPS. RAPS means **R**eceiver **A**utomatic **P**rogramming **S**ystem and works like this:

Always when you switch off your receiver, RAPS is looking for changes in the channel lists. This takes only a few seconds. If there are any, the new data will be taken automatically as new channel list. If the channel parameters of a program will be changed, RAPS will take over these automatically.

If there are new programs, these will be added. If programs are switched off forever, the channel list positions will be deleted. New programs will not simply be added but divided in logical blocks in order to allow fast find.

For example for Germany there are a basic list and additionally the groups 3rd programs, info and sports, special interest, local TV, news (beginning position 100) and many music channels (beginning position 123).

After you selected *RAPS*:


Help message
The receiver will install RAPS within the next 3 seconds. It is necessary that you receive signal from Astra 19.2° East. If you can t receive Astra 19.2° East, please press <Exit> on your remote control.
Antenna settings
Satellite1 19.2°E ASTRA 1F,1H,1KR,1L,1M
Satellite2 Not assigned
Satellite3 Not assigned
Satellite4 Not assigned

1. Press **OK**, in order to confirm the chosen installation type.
2. Press the **green function key** (continue) in order to go to the next installation window.

   The third installation window **Antenna Settings** starts the RAPS installation. You only have to wait 10 seconds. The installation begins with a „DiSEqC scan“, searching through the antenna signal for receivable satellites.

   Press the **green function key (continue)**.after the search for satellites is completed.

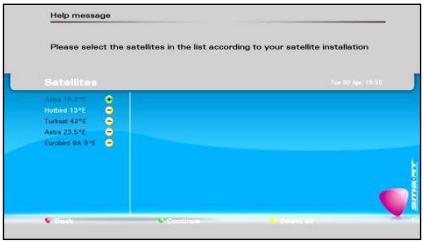
> ➢ Note that for the RAPS installation you must be able to receive signal from Astra 19.2° East.

The next window displays the found satellites (marked with +):

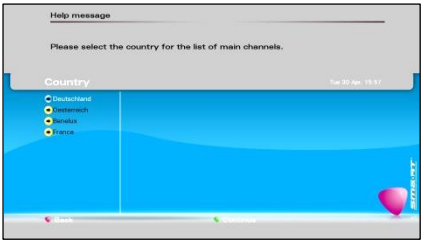
3. Press the **green function key** (continue), in order to take over these satellites

or

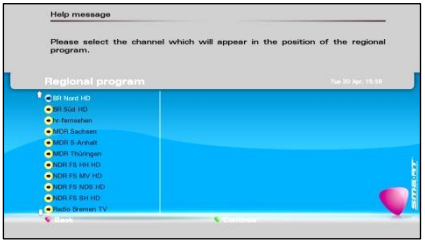
select more satellites with the keys ▲ and ▼ (of course, you should know that they are receivable) and confirm each with **OK**, then press the **green function key** (continue)
or
press the **yellow function key** (select all), in order to select all satellites, then press the green function key (continue).
In the next window you should select your country (respectively the country, where the receiver is operated).



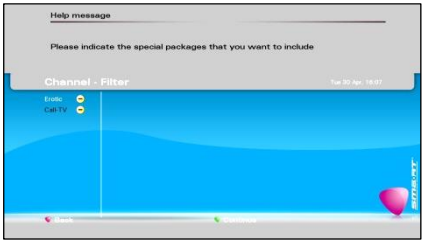
4. Select the country with the keys ▲ and ▼ and press the green function key (continue), in order to confirm and to go to the next window, where you can select your preferred regional program ("3rd program").

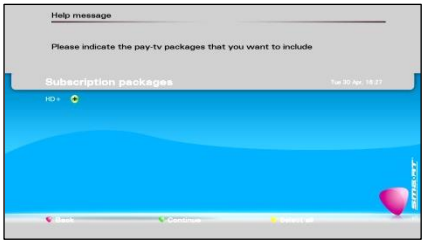


5. Select the desired program, whose position should be 3 in the channel list, with the keys ▲ and ▼ and press the green function key (continue), in order to confirm and to go to the next window Channel - Filter, where you can select, whether you want to add erotic programs and call TV to your channel list. Both offers may cause high telephone costs.



6. Select erotic and call TV with the keys ▲ and ▼ and confirm each with **OK**, in order to add erotic programs and call TV to your channel list (mark with +). Then press the green function key (continue), in order to go to the next window Subscription packages. You are asked, whether pay TV providers should be added to the channel list:





E. g. if you select HD+, the SD channels will automatically be exchanged with the corresponding HD channels, i. e. the HD channels are located in the channel list, where you normally find the SD versions (e. g. RTL at pos. 4) and the SD channels are located at pos. 333 and the following.

If you do not select the pay TV package, the SD channels are at the beginning of the channel list (e. g. RTL at pos. 4), the HD versions of these channels are not anymore included in the channel list.

By default HD+ is activated. Press **OK**, in order to deactivate HD+. Press **OK** once more, in order to activate HD+ again.

If you first choose HD+ channels, but do not want them later, you have to perform a new RAPS configuration deselecting the pay TV package.

7. Press the green function key (continue), in order to start the installation of the channel list. When the installation is complete the receiver switches automatically to TV mode.

5.3 Installation without RAPS

5.3.1 Predefined List

➢ Select **Predefined List** and press **OK**, in order to take over the **predefined list** or an empty list.

  ➢ Press the green function key (continue).

  ➢ In the next window select with the keys ▲ and ▼ one of these options: *Standardliste*: *Default List*
  Default, the receiver contains a simple channel list with a small number of channels.
  or
  Blankoliste: *Plain List*,

Channels have to be added manually (e. g. by performing a **Channel Search**, see section 7.9.7, page 84).

➢ After pressing **OK** the receiver switches to TV mode.

If you selected Plain List, the screen remains black, because there is not yet a filled channel list.

➢ Select **Satellite Search** and press **OK**, in order to perform a scan over all satellites and find all receivable channels and to add them to the **All Channels Lists** (“Gesamt TV”, “Gesamt Radio”). The next steps are the same as described under item 2 in section 5.3.2.

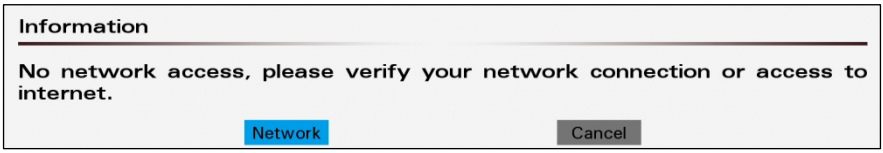
5.3.2 Automatic (HD+)

1. Select **Automatic (HD+)** and press **OK** and then the **green function key (continue)**, in order to download the HD+ channel list. You‘ll get the menu window **Antenna Settings**, where you can select the satellites from which you want to receive programs.
2. Select with the keys ▲ and ▼ the items *Satellite1*, *Satellite2*, *Satellite3* or *Satellite4* (you can select maximum four receivable satellites). Change with the key ▶ to the right side of the window. Select there with the keys ▲ and ▼ the desired satellite and confirm with **OK**
   or
   Press Auto detect (yellow function key), in order to search for satellites automatically.
   The satellite search starts. On top of the menu window there occurs a progress bar. Wait until the satellite search is completed.
3. Press the **green function key** (continue), in order to start a channel search. Wait until the channel search is completed.
4. Press the **green function key** (continue), in order to accept the HD+ channel list.
5. Press the **green function key** (continue) after the channel search is completed, in order to save/confirm the found channels.

5.4 Network

As standard with CX10/VX10 there is DHCP[6] activated, i. e. the receiver asks the router for an IP address[7]. As soon as the IP address has been assigned the internet connection works.

Before you will go to TV mode, after the RAPS installation, the following message will appear:



➢ Select **Network** to establish a connection by accessing the setup and settings in the **Network** section starting from page 81
or
select **Cancel** to continue the TV mode without network connection.

5.5 Software Update

Once you have put your CX10/VX10 into operation, you should first update the operating software of your receiver!

There are different possibilities to update the software of your CX10/VX10.

5.5.1 Update via USB

You also can transfer the current software via the USB interface:

1. Look for the update file on the website www.smart-electronic.de (item Support → CX10 or VX10 → Download).
2. Save the file to your PC.
3. Unpack the file, which is a .zip archive.
4. Copy the new software file (30-35 MB) on a USB storage device. Do not rename the file after unpacking.

[6] DHCP = Dynamic Host Configuration Protocol, is an auto configuration protocol used on IP networks.
[7] IP address (Internet Protocol address), is a label assigned to each device (e. g., computer, printer) included in a computer network using the Internet Protocol for communication. With the IP address the units in the network are addressable and thus accessible.

- Ensure that the update file (idl5k.bin) is included directly in the root directory of your USB storage device (**no subdirectory)!**
- Do not rename the unpacked file!

5. Switch off your receiver (with the mains switch at the rear panel).
6. Plug in the USB storage device.
7. Switch on the receiver via the mains switch and press at the same time the key ▲ at the front panel.
   The text in the receiver's display is „WAIT" and then „LOAD". On the TV screen you see the smart logo and a progress bar. As soon as you see the smart logo you can release the key ▲. The update needs about one minute. After the update normal operation is started automatically.
8. After the update, reset the receiver to factory defaults (section 7.9.8, page 85).

5.5.2 Online Update

You can update your device directly over the Internet.

If a connected USB storage device contains an update file, the software is not updated over the Internet, but via the USB port (see above).

Please, ensure that your device is properly connected to the Internet. For more information on cabling and the right settings, see the instructions in the sections 4.6 on page 22 and 7.9.6 on page 81.

1. In TV mode press **MENU**.
2. Select the menu **Control Panel**.
3. Select the submenu System Update and follow the instructions on the screen.
4. After the update reset the receiver to factory defaults (section 7.9.8, page 85).

5.5.3 OTA[8] Update

Updating the software is also possible via satellite.

Attention!

Updating the software via satellite can need up to more than one hour.

When there is a connection to the internet or an attached USB storage device contains a valid update file, the receiver will not be updated via satellite, but online (internet) or via the USB port (see above).

Please ensure, that you can receive Astra 19.2° east.

1. In TV mode press **MENU**.
2. Select the menu **Control Panel**.
3. Select the submenu **System Update** and follow the instructions on the screen.
4. After the update reset the receiver to factory defaults (section 7.9.8, page 85).

5.5.4 Automatic Update

The receiver also checks in subsequent operation continuously, whether online or via satellite a newer software file than the already installed is available.

5.5.4.1 Update During Operation

If a new software is available you'll get a corresponding message a few minutes after turning on the receiver:

➢ Select *Confirm* to

a) load the new software from a connected USB storage device and then install it,

or

b) to download the new software from the internet without USB storage device but with an active internet connection and then install it

or

[8] OTA = **O**ver **T**he **A**ir = via satellite

c) to download the new software from the satellite Astra 19,2° east without USB storage device and without active internet connection and then install it.

Attention!

Updating the software via satellite can need up to more than one hour.

Therefore now a solicitation appears to plug a USB disk. The further procedure is as described in the following section.

➢ Select *Cancel event*, if you do not want to update now.

5.5.4.2 Update During Standby-Mode

Since updating the software via satellite can need up to more than one hour, you can download the update file CX10/VX10 in standby mode and save it to a connected USB storage device.

The actual update is carried out from the USB device when you switch on the receiver the next time (see section 5.5.4.1 a). It takes only one minute or two.

5.6 Operation Mode

The operation mode after the first switch on (or after re-storing the factory settings) is television (TV).

When you switch-on the receiver after it was off, the mode is always the selected prior to switch-off.

You can select the modes TV (television programs) and radio (radio):

➢ Press the key **TV/R** on the remote control. Following window appears:

➢ Select with the keys ▶, ◀, ▲ and ▼ the valid channel list:

- ➢ Select *Gesamt TV*, in order to set the TV mode.
- ➢ Select *Gesamt Radio*, in order to set the Radio mode.
- ➢ Select an own list (here *Meine Favoriten 1*), in order to define a favorite list as basis for the further operation (Radio or TV).

➢ Press **OK**, in order to confirm your selection.
The window disappears and you see or hear the first channel of the selected channel list.

In order to keep descriptions simple, we will assume "normal" TV mode.

The menu operation is basically independent from the operation mode (Radio or TV).

5.7 Open/Close Menu

Your smart receiver is operated via an OSD (OnScreenDisplay).

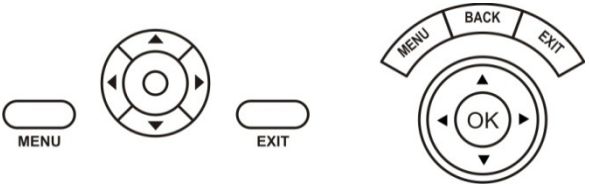
➢ Press the key **MENU** (of the remote control or at the receiver) in order to open the menu:

If you open the menu during watching TV, the first menu window is always the one shown above.

➢ Press the key **EXIT**, in order to close the menu again.

5.8 Menu Navigation

You can navigate in the menu with the keys on the remote control as well as with the keys at the receiver.

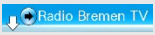


receiver *remote control*

- Press ▲, in order to go to the menu item above.
- Press ▼, in order to go to the menu item below.
- Press ▶ and ◀, in order to go to the menu item right or left or to change a selected value.
- Press **OK**, in order to select a menu item or to confirm a set value.
- Press **BACK**, in order to go to the previous menu item.

Menu items that are active are highlighted in color.

If there are more values in a list than what is displayable, you will get additional symbols at the top and at the bottom, which indicate, that the list is longer than you can see.



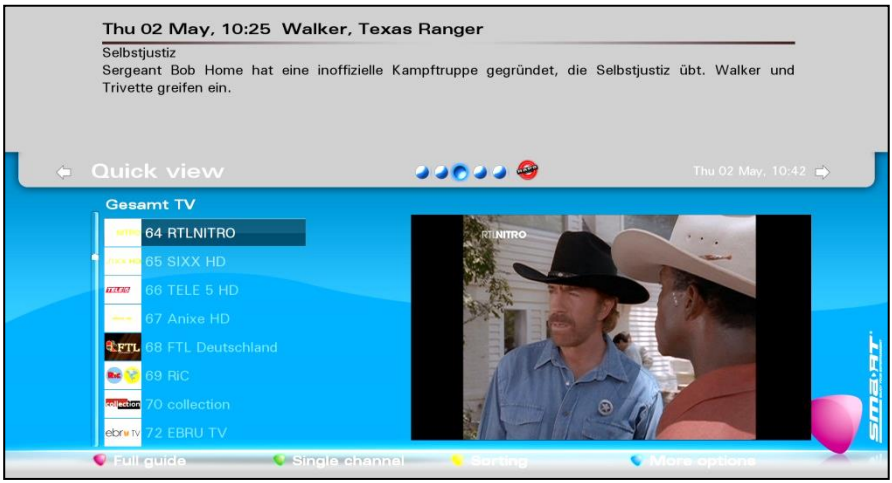
list goes on at bottom.

list goes on at top.

5.9 Watching TV

5.9.1 Channel Selection

- Select with the keys ▲ / **P+** and ▼ / **P-** the channel which you want to see
  or
- Type the channel list position of the desired channel via the numeric keys of the remote control and confirm with **OK**
  or
- Press **OK**, in order to open the window **Quick view**.



Following is displayed:

- The currently used channel list (here *Gesamt TV)*.
- A thumbnail of the current channel.
- Detailed info about the current program in the upper part of the window.
- At the bottom of the window there are four function keys in order to access enhanced functions.

➢ Press the keys ▲ and ▼, in order to navigate through the channel list and to select a channel (the selected channel is highlighted).

➢ Press **OK**, in order to switch to the selected channel (this channel will be shown in the thumbnail view).

➢ Press the keys **P+** and **P-**, in order to move eight positions in the channel list up or down.

5.9.2 Select Channel List

1. Press the key **FAV** (on the remote control), in order to open the window **Choose default list**:

2. Press the keys ◀ and ▶ in order to select the channel list, which you want to define as standard for further operation.
3. Press **OK**, in order to confirm your selection and to close the window.

From now on the selected list will be displayed when you press **OK** in TV mode (see section 5.9.1).

5.9.3 Recall

➢ Press the key **RECALL** of the remote control in order to switch to the previous channel.

5.9.4 Teletext (Videotext)

Teletext (or "broadcast teletext", in Germany “Videotext”) is a television information retrieval service. To receive teletext the broadcast station must support this function.[9]

➢ Press the key **TXT** of the remote control, in order to switch on teletext. The first teletext page 100 is displayed.

When you switch on teletext the first time your receiver loads and saves maximum 1800 pages (incl. all sub-pages), which then can be accessed very fast. The number of already loaded teletext pages is displayed at the bottom left side. The page memory will be cleared if you switch to another channel.

This way you can navigate between teletext pages:

Key	Function
▲ or the **green function key**	next main page
▼ or the **red function key**	previous main page
▶	next subpage or next main page if there are no or no more sub pages
◀	previous subpage or previous main page if there are no or no more sub pages

[9] Teletext information is broadcast in the vertical blanking interval between image frames in a broadcast television signal.

Key	Function
yellow function key	opens the start page 100
blue function key	opens page 200 (content is channel dependent)
Menu key	switches the view of teletext : • normal (normal, teletext is displayed all over the TV image) • small (reduced size, about 1/6, displayed top left) • half (reduced size on half of the screen)

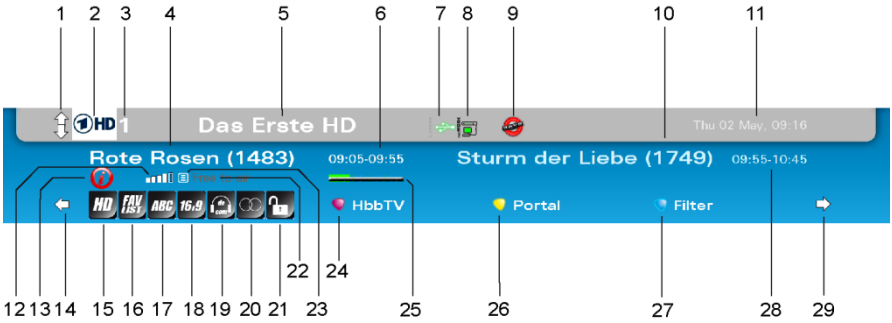
When Teletext is activated the arrow keys (▲/▼/◄/►) can only be used for navigation. The volume control is only possible via the keys **+** and **-**.

➢ Press the key **EXIT** or once more the key **TXT**, in order to switch off teletext again.
Now, the volume can be changed again via the arrow keys ◄ and ►.

5.9.5 Quick Access Menus

➢ Press the key **INFO**.

You see the **info window** with details about the current channel:



No.	Function
1	Press the keys ▲ and ▼, in order to switch to the previous or next channel.
2	Logo of the current channel
3	Position of the current channel in the channel list
4	Name of the current program
5	Name of the current channel
6	Beginning and end of the current program
7	USB storage device is connected
8	Receiver is connected to a LAN via a wired connection.
9	The current channel is included in a RAPS channel list.
10	Name of the following program
11	Current day, date and time
12	Signal strength
13	The current channel provides HbbTV
14	Press the key ◀ in order to go to the previous quick access menu.
15	The current channel is broadcasted with legacy resolution SD (Standard Definition) or with high resolution HD (High Definition).
16	The current channel is included in a favorite list (the standard channel list is also considered as a favorite list).

No.	Function
17	The current program provides subtitles.
18	The current channel is broadcasted in legacy 4:3 format or in 16:9 format.
19	For the current program various languages / different audio modesare available.
20	The current channel is broadcasted with legacy stereo sound or in Dolby Digital.
21	The current channel is locked / not locked (parental control).
22	The current channel is receivable freely[10].
23	The current channel is broadcasted with Teletext.
24	Indication of pressing the red function key to show HbbTV messages and HbbTV content.
25	Graphical representation of the sequence of the current program.
26	Indication of pressing the yellow function key to directly access the smartPORTAL.
27	Indication of pressing the blue function key to directly access the sorting function.
28	Beginning and end of the following program.
29	Press ▶, in order to go to the next quick access menu.

- Press the key **INFO** during TV mode or Radio mode, in order to open the info window any time.
- The info window is automatically closed, but you can also Press the key **EXIT**, in order to close it manually.

- Press the keys ◀ and ▶, in order to go to the various quick access menus:

◀	▶
Add to favorite	Mini Guide[11]
Subtitles	**Full Guide**

[10] FTA = Free To Air, the channel is broadcasted without scrambling
[11] EPG = Electronic Program Guide = electronic program guide, electronic program magazine

◀	▶
Aspect Ratio	**Personal Planner**
TV Resolution	**List Manager**
Soundtrack	
Audio	
Sleep Timer	
Parental Control	

The quick access menus correspond partly to the ‘normal‘ menus as explained below, but in some cases the functional range is restricted. Therefore, these menus are easier to operate.

Example:
In the quick access menu **Add to favorite** you add simply the current channel to a favorite list by pressing **OK** two times.

5.9.6 Adding a channel to a favorite

1. Press the keys **INFO** and one time ◀, in order to go to the window **Add to favorite**.
2. Press **OK**, in order to select the first favorite list.
3. Press the keys ◀ and ▶, in order to select the favorite list, to which you want to add the current channel and confirm with **OK**.
4. Press **EXIT**, in order to go back to the TV mode.

5.9.7 Subtitles

If the current channel contains subtitles in different languages you can select the desired subtitles in the quick access menu **Subtitles**.

1. During watching TV, press the keys **INFO** and two times ◀, in order to go to the quick access menu **Subtitles**.
2. Press **OK**, in order to select the first option
3. Press the keys ◀ and ▶ in order to select between the different options and confirm with **OK**.
4. Press **EXIT**, in order to go back to the TV mode.

5.9.8 Aspect Ratio

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **Aspect Ratio**.
2. Press **OK**, in order to select the first format.
3. Press the keys ◀, ▶, ▲ and ▼, in order to select the desired format. Possible values are:

Value	Meaning	
4:3 Automatic	4:3 TV set	Independently from the current program you do not lose any image information.
4:3 Pan & Scan		• 4:3 programs are displayed optimal. • 16:9 programs: the image size is changed in order to fit the screen height, at both sides right and left, there is image information missing.
4:3 Letter/Pillar Box		• 4:3 programs are displayed optimal. • 16:9 programs: the image size is reduced in order to fit the screen width; a lack of height is filled up by black bars.
16:9 Automatic	16:9 TV set	Independently from the current program, you do not lose any image information.
16:9 Pan & Scan		• 4:3 programs: the image size is changed in order to fit the screen width, at top and bottom, there is image information missing. • 16:9 programs are displayed optimal.
16:9 Letter/Pillar Box		• 4:3 programs: the image size is reduced in order to fit the screen height; a lack of width is filled up by black bars. • 16:9 programs are displayed optimal.

4. Press **OK**, in order to confirm your selection.
5. Press **EXIT**, in order to go back to the TV mode
   or
   change to another quick access menu.

☞ Sometimes there are programs on the HD+ channels in 4:3 format, where you cannot change the aspect ratio!

Beside the quick access menu **Aspect Ratio**, you can also change the aspect ratio directly via the key **16:9** of the remote control. The current setting is displayed on the receiver:

Display	Meaning
4/3 A	*4:3 Automatic*
4/3 C	*4:3 Center Cut-Out = 4:3 Pan & Scan*
4/3 L	*4:3 Letter/Pillar Box*
16 L	*16:9 Letter/Pillar Box*
16 C	*16:9 Center Cut-Out = 16:9 Pan & Scan*

5.9.9 TV Resolution

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **TV Resolution**.
2. Press **OK**, in order to select the first resolution value[12].
3. Press the keys ◀, ▶, ▲ and ▼, in order to the highest value your TV set can show.

Value	Order
1080p[13]	Highest value
1080i	↓
720p	
576p	
576i	Smallest value

4. Press **OK**, to confirm your selection. Now, you can change to another quick access menu.
5. Press **EXIT**, in order to go back to the TV mode.

If your receiver and your TV set are connected via Scart, the maximum resolution 576i.

[12] Vertical resolution in lines
[13] p = progressive, i = interlaced

Beside setting the resolution via the menu, you can also change the resolution directly via the remote control:

- Press the key **V-Format** (perhaps several times), in order to change the video resolution at the HDMI output. The current setting is displayed on the receiver You can set these values:

Display	Value
576P	*576p*
720P	*720p*
HD I	*1080i*
HD P	*1080p*

5.9.10 Soundtrack

If a program is broadcasted with multi-channel tone, you can select a language in the quick access menu **Soundtrack**.

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **Soundtrack**.
2. Press **OK**, in order to enter the menu and to select the language Deutsch.
3. Press the keys ◀, ▶, ▲ and ▼, in order to select the desired language and press **OK**, in order to confirm your selection. You can change now to another quick access menu.
4. Press **EXIT**, in order to go back to the TV mode.

5.9.11 Audio

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **Audio**.
2. Press **OK**, in order to select the audio mode.
3. Press the keys ◀, ▶, ▲ and ▼, in order to select the best value for the current program.

Mode	Meaning
Dolby Digital	At the receiver outputs the encoded Dolby Digital audio signal is available (for items that are broadcast with Dolby Digital sound).

Mode	Meaning
Stereo	Both the left and right stereo channels are available at the receiver outputs.
(left)	The left audio channel of a program is available at both receiver outputs (e. g. for bilingual broadcasting).
(right)	The right audio channel of a program is available at both receiver outputs (e. g. for bilingual broadcasting).

4. Press **OK**, in order to confirm your selection. You can change now to another quick access menu.
5. Press **EXIT**, in order to go back to the TV mode.

5.9.12 Sleep Timer

The CX10/VX10 has a sleep timer that allows that the device automatically goes to the standby mode (standby). You can

- set the time manually **or**
- select one of the given time intervals.

You can also switch off a programmed or already active timer.

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **Sleep Timer**.
2. Press **OK** or ▼, in order to enter the menu.

Now you have various options:

a) Manual Entry:

The maximum time interval you can set manually is 23:59

1. Press the keys ◀ and ▶, in order to select *Set Time Manually*.
2. Press **OK** to open the window **Set Time Manually**.
3. Press **OK** once more, in order to activate the entry of the hours and set them with the keys ▲ and ▼.
4. Press ▶, in order to go to the entry of the minutes and set them with the keys ▲ and ▼.
5. Press **OK**, in order to confirm your entries.

6. Press **EXIT**, in order to go back to the TV mode.

b) Select from the Given Time Intervals:

1. Press the keys ◀ and ▶, in order to select the desired time interval.
2. Press **OK**, in order to confirm your selection to activate the timer. You can change now to another quick access menu.
3. Press **EXIT**, in order to go back to the TV mode.

c) Deactivate the Timer:

1. Press the keys ▲ and ▼ in order to select the key **Off**.
2. Press **OK**, in order to confirm your selection. You can change now to another quick access menu.
3. Press **EXIT**, in order to go back to the TV mode.

5.9.13 Parental Control

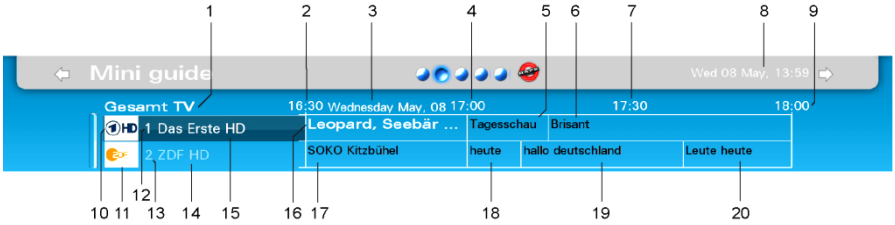
When enabled in Settings / Parental blocking channels, you can simply edit the list of blocked channels.

1. Press the keys **INFO** and several times ◀, in order to go to the quick access menu **Parental Control**.
2. Press the keys ◀ and ▶, in order to decide, whether you want to block or deblock the current channel.
3. Press **OK**, in order to confirm your selection. You can change now to another quick access menu.
4. Press **EXIT**, in order to go back to the TV mode.

5.9.14 Mini Guide

The Electronic Program Guide (EPG) is a convenient substitute for a printed program guide. You can also use EPG to program records easily. The CX10/VX10 offers two EPG versions.

➢ Press the keys **INFO** and one time ▶, in order to open the window **Mini Guide**:



No.	Meaning
1	Name of the current channel list
2	EPG original time (first time mark)
3	EPG day and date
4	Next full hour after the original time (second time mark)
5	Second program of the current channel
6	Third program of the current channel
7	Third time mark (second time mark + 30 minutes)
8	Current day, current date and current time
9	Fourth time mark (third time mark + 30 minutes)
10	Logo of the current channel
11	Logo of the next channel in the channel list
12	Position of the current channel in the channel list
13	Position of the next channel in the channel list
14	Name of the next channel in the channel list
15	Name of the current channel
16	Name of the current program
17	Name of the current program of the next channel
18	Second program of the next channel
19	Third program of the next channel
20	Fourth program of the current channel

If you are in the window **Mini Guide** you can access further functions:

➢ Press **OK**, in order to get detailed information about the current program and in order to get access to following functions:

- Press the keys ▶ and ◀, in order to scroll forward or backward.
- Press the keys ▲ and ▼, in order to get detailed information about the current program and then, after pressing the keys once more, to get EPG data for all channels of the current channel list

If the existing text in the detailed information can not be displayed at once, an automatic scrolling process starts after 3 seconds.

5.9.15 Full Guide

- Press the keys **INFO** and two times ▶ or press **EPG** on the remote control, in order to go to the window **Full Guide**.

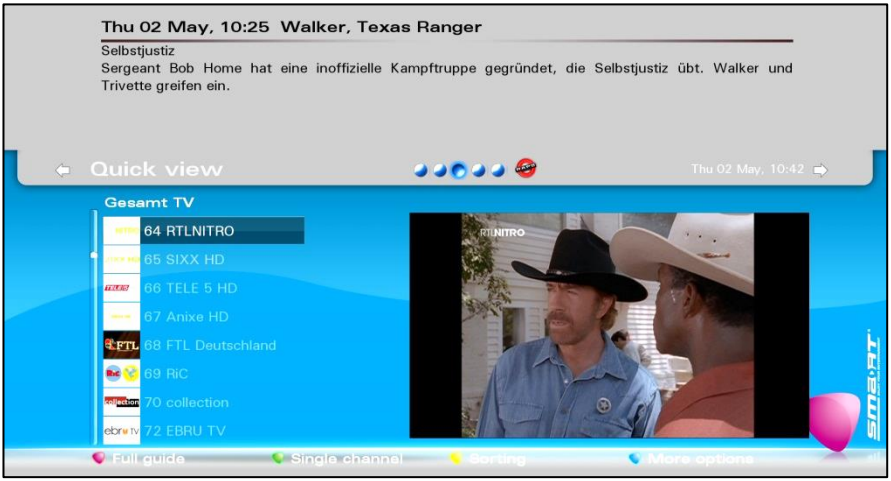
Wed 08 May, 14:15 Land und lecker (1)
Wer kocht das beste Landmenü?
Sechs Bäuerinnen aus unterschiedlichen Landschaften stellen die Kochkünste unter Beweis. Eine lädt ihre Kontrahentinnen zu einem Drei-Gänge-Menü auf den Hof ein. Und am Ende steht die Frage: Wer hat das beste Landmenü zubereitet? Corinna Ebsen lebt mit Mann Oke, drei Kindern, den Schwiegereltern und vielen Rindern, Schweinen und Hühnern im nordfriesischen Langenhorn. Zum Dinner gibt es selbst
Full guide
Wed 08 May, 14:52
Gesamt TV
14:52 Wednesday May, 08 15:00
15:30
16:00
1 Das Erste HD
2 ZDF HD
3 BR Nord HD
4 RTL HD
5 Sat 1 HD
6 Vox HD
7 Prosieben HD
8 arte HD
Rote R...
Tagesschau
Sturm der Liebe (1754)
Die Kü...
heute
Topfgeldjäger
Land...
Bergbauern - wie's weitergeht
Wir in Bayern
Die Tr...
Verdachtsfälle
Auf St...
Familien-Fälle
Verkla...
Shopping Queen
The Big Bang Theory
The Big Bang Theory
How I Met Your Mother
Die Spieler
Quick view
Single channel
Sorting
More options

- The window **Full Guide** is similar to the window **Mini Guide** and you can operate it in the same way. The main difference is that it shows eight channels at the same time. Additionally there are four function keys at the bottom, which offer more features. You can also open the window **Full Guide** via the main menu (Guide).

  If you are in the window **Full Guide** you can access further functions:

- Press the keys ▲ and ▼, in order to view the EPG data of all channels in the current channel list.
- Press the keys ▶ and ◀, in order to switch inside one channel from one program to the other.

➢ Press the **red function key**, in order to switch between the window **Quick view** and the window **Full Guide**.



➢ Press the blue function key, in order to open the window More options:

➢ The possible display and edit functions are explained in section 7.11, on page 90.

➢ Press the **green function key**, in order to switch between **Full Guide** and **Single Channel**.
The window **Single Channel** only shows the programs of one channel:

Fri 10 May, 09:30 Primal Grill - Grillen für Profis
Entwicklungssprung in der Barbecue-Evolution dar. Die weltweite Beliebtheit von Kebab und Satè zeugt vom ungebrochenen Reiz aufgespießter Speisen. Umso ärgerlicher sind Kebabs auf Bambusspießen mit angekokelten Enden sowie Metallspießen mit rohen Zwiebeln und verbratenem Fleisch. Wer jemals Schwierigkeiten beim Aufspießen eines Shish Kebabs hatte oder einfach nur sein Barbecue-Repertoire erwe
64 RTLNITRO
Fri 10 May, 09:49
09:30-09:55 Primal Grill - Grillen für Profis
09:55-10:20 Primal Grill - Grillen für Profis
10:20-10:50 Primal Grill - Grillen für Profis
10:50-11:15 Hairy Bikers US
11:15-11:40 Hairy Bikers US
11:40-12:05 Hairy Bikers US
12:05-12:30 Hairy Bikers US
12:30-13:00 Hairy Bikers US
13:00-13:25 Auf der Suche nach dem perfekten Genuss
Quick view
Full guide
More options

➢ Press **EXIT**, possibly several times, in order to close all EPG windows and to go back to the TV mode.

5.9.16 Personal Planner

The **Personal Planner** which is available via the key **INFO**, is the same as the **Personal Planner** explained in section 7.4 on page 58.

5.9.17 List Manager

The submenu **List Manager** which is available via the key **INFO**, is the same as the **List Manager** explained in section 7.5 on page 60.

5.10 HbbTV[14]

Your CX10/VX10 allows you to use the various HbbTV offers of the broadcast stations.

For that purpose you need to proceed as follows:

1. Ensure that, beside the connection to the SAT antenna, your receiver is connected to the internet. How to connect your receiver to a home network and thus to the internet is described in the sections 4.6 on page 22 and 7.9.6 on page 81.
2. Press the **red function key** in order to view the HbbTV notification.

[14] HbbTV = Hybrid Broadcast Broadband TV, HbbTV is intended to extend the reach of multimedia content to the television set, and to enable the TV viewer to more conveniently access both broadcast digital content (especially HD) and Internet.

The HbbTV notification will only be displayed, if the current channel is broadcasting HbbTV content.

3. Press the **red function key** once more in order to view the HbbTV content. Now you can, depending on the broadcast station, access other functions, mostly via the colored function keys.
4. Press the **red function key** again in order to hide the HbbTV content.

➢ If you want to access the menu, you must leave HbbTV completely. For that purpose, press **EXIT**!

6 PVR

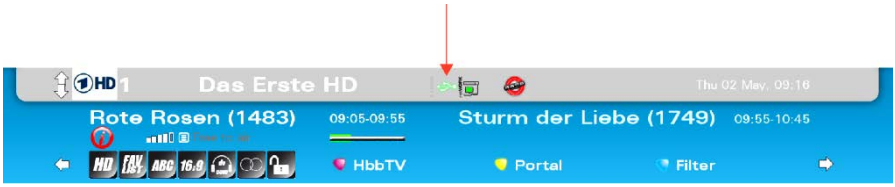
6.1 Record

There are three options, to use the personal video recorder with an external USB or eSATA disk to record TV and radio programs:

First, connect an USB disk to the USB port at the rear panel of the CX10/VX10 and wait until it is detected by the receiver.

You must connect your eSATA storage device before switching on the receiver.

For a short time the info window (section 5.9.2) will be displayed, extended by a disk icon.



You will find adequate USB sticks and external hard disks in the smart accessory shop on www.smart-electronic.de.

Note that if you have a disk divided into multiple partitions you first must specify the default folders for record and timeshift (see section 7.3.4, page 56)!

- Press **REC** during watching a TV program (Quick Shot)
  or
- Select programs in the EPG screen and add them to the **Personal Planner** (see section 6.2, page 50)
  or
- Schedule a record directly in the **Personal Planner** (see section 7.4, page 58).

The storage requirements for records are approx. 40 MB per minute (2.5 GB / hour) for SD records (standard resolution) and approx. 120 MB per minute (7.0 GB / hour) for HD records (high resolution).

The records are stored in .TRP format. There a directory will be created which includes several files/streams (container). Of course, these files will be connected during playback.

The CX10/VX10 uses the FAT32 file system for records. It has a NTFS detection for playback.

6.2 Programming via EPG

From the EPG windows **Full Guide** and **Single Channel** you can directly access the **Personal Planner** event type window (see section 7.4 on page 58) and schedule records, channel selection, or reminders.

- Press the keys ◀ and ▶ or ▲ and ▼, in order to select the program you want to record, you want to switch to, or about that you want to be reminded.
- Press **OK**. A new window is opened at the top.

1. Press the keys ◀ and ▶, in order to select under **Edit scheduled event** which event should be controlled.
   - ➢ Select *Record*, in order to schedule the record of the selected program.
   - ➢ Select *Tune*, in order to switch to the selected program, when that begins.
   - ➢ Select *Reminder*, in order to display a hint in the current program, when the selected program begins.
2. Press ▼, in order to go to **To take place** and to change the repeat mode.

Since it is easier to understand we will describe the settings only for the event Record.

- ➢ Select *Single*, in order to record the selected program only once.
- ➢ Select *Daily*, in order to record the selected program every day (at the same time).
- ➢ Select *Mon-Fri*, in order to record the selected program from Monday to Friday at the same time.
- ➢ Select *Weekly*, in order to record the selected program every week at the same day of the week.

1. Press ▼, in order to go to the button **Confirm**.
2. Press **OK**, in order to go back to the EPG window.

You cannot schedule recordings for programs which began in the past!

You can record a running program by pressing the key REC (starting a quick shot).

Press the key REC once more, in order to open a query window. Here you can

- stop the record immediately,
- stop the record after 15 minutes or
- create a link to the EPG.

Select the option Bind EPG, in order to stop the record at the end of the current program.

6.3 Time Shifting

If a storage device (SATA hard disk, USB disk, USB stick) is connected to the receiver, you can pause playback of the current program and resume it later at exactly the same position again.

- Press ⏯, in order to pause the current program (freeze frame) and to start the time shift record. For a short time the info window (section 5.9.5) will be displayed.
- Press ⏯ once more, in order to resume the playback of the current program.
- Press the keys ◀◀ and ▶▶, in order to go fast-forward and go fast-backward as you know it from your DVD player or video cassette recorder. Three different speeds are possible:

Display	Meaning
◀◀ or ▶▶	Fast forward / fast backward
◀◀◀ or ▶▶▶	Higher speed
◀◀◀◀ or ▶▶▶▶	Highest speed

Press the key ■, in order to go back to the currently broadcasted program.

6.4 Playback

There are different options for play back an USB recording:

6.4.1 Direct Playback

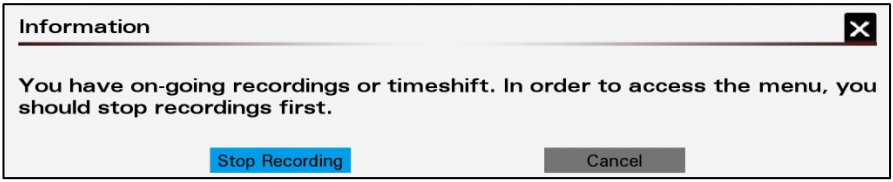
1. Press **PVR**, in order to open the window **All media** (see section “Manage Your Recordings”, page 54).
2. Press **OK** two times, in order to open the connected storage device. All files stored on the device will be displayed.
3. Press the keys ▲ and ▼, in order to select the recording you want to playback. Press **OK**, in order to open a subdirectory. If you open a file with **OK**, the movie will be played back in a preview window.
4. Press **OK** once more, in order to play back the movie in full screen mode.
5. Use the keys ◀◀ ▶▶, ⏯ and ■, in order to control the playback.

6.4.2 Playback via the Media Player

You can also playback USB recordings via the Media Player described in section 7.7, page 65.

6.5 Recording one Channel and Watching another at the same Time

If you start a record with the key **REC** and then want to open the channel list with **OK**, you'll get such a message:


Information
You have on-going recordings or timeshift. In order to access the menu, you should stop recordings first.
Stop Recording
Cancel

However, during an on-going recording you can switch the screen to another channel broadcasted via the same transponder as the recorded channel:

➢ Press the keys ▲ and ▼ or the keys **+** and **–**.

Note:
You can record from HD+ channels, but the record files are subject to the HD+ restrictions (e. g. only the scrambled program will be stored, the fast forward and fast backward functions are limited).

6.6 Recording and Playing EPG Data

During recording EPG Data is stored.

➢ Press **INFO** two times to show this information during playback.

7 Extended Functions and Settings

This chapter explains all the commands that can be accessed from the menu. In addition, other features are described that haven't been mentioned yet.

7.1 Operating Mode Live TV

➢ Select the submenu **Live TV** and press **OK**.
You see the first channel of the current TV channel list. For a short time the info window will be displayed (see section 5.9.5, page 37).

7.2 Operating Mode Live Radio

➢ Select the submenu **Live Radio** and press **OK**.
You see the first channel of the current Radio channel list. For a short time the info window will be displayed (see section 5.9.5, page 37).

➢ The info window disappears automatically. You also can press **EXIT**, in order to close it prematurely.

7.3 Manage Your Recordings

In this submenu you can manage your recordings (movies). You can just display them (including preview), delete them or rename them.

You can also format the data storage device, mount and unmount the data storage device, and set default folders for record and time shift.

1. Ensure that you connected a data storage device to the receiver.
2. Select the submenu **Recorded TV** and press **OK**.
3. Press **OK** two times, in order to open the connected data storage device. All files stored on the device will be displayed.

➢ If you have not connected a data storage device, you'll receive an appropriate error message.

7.3.1 Display and Playback Recordings

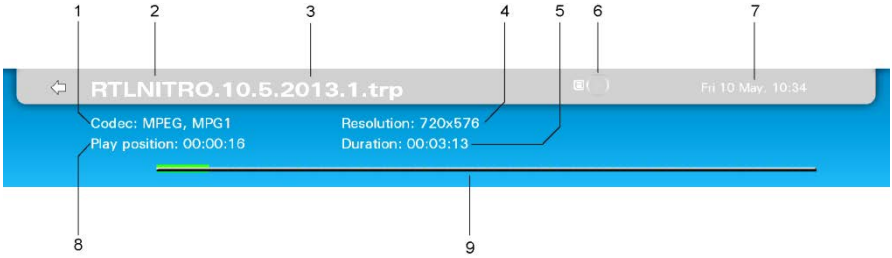
➢ Press the keys ▲ and ▼, in order to mark a file or a subdirectory. In the preview window you see a short description of the selected file.

➢ Press **OK**, in order to open the file or subdirectory. The movie will be played back in the preview window

> If you are already in a subdirectory, you can select **Up folder** in order to go to the parent directory.

➢ Press **OK** once more, in order to play back the movie in full screen mode.

➢ For a short time an info window will be displayed:



No.	Meaning
1	Codec which was used during recording, record file format
2	Name of the recorded program
3	Date of the recorded program
4	Record resolution
5	Record file duration
6	Symbol for playback / pause (to be changed with the key ⏯)
7	Current date, time
8	Numerical indication of the current playback position
9	Graphical indication of the playback progress

➢ The info window disappears automatically. You can press **EXIT**, in order to close it prematurely.

7.3.2 Deleting a Recording File

➢ Press the **red function key** in the submenu **Recorded TV**, in order to delete a marked file.

With the delete function you can exclusively delete files. You cannot delete directories, even if they are empty

7.3.3 Renaming a Recording File

➢ Press the **yellow function key** in the submenu **Recorded TV**, in order to rename a marked file or directory.

- Navigate to the left and to the right with the keys ▶ and ◀.
- Delete characters with the **red function key**.
- Add new characters by pressing – if necessary several times – the keys **0 … 9** of the remote control.

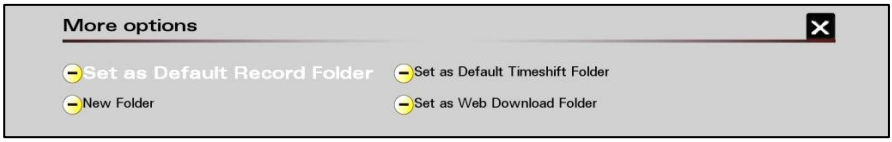
Example: press seven times the key **9**,in order to insert a small x.

7.3.4 Define default directories

➢ Press the **blue function key** in the submenu **TV/Radio / Recorded TV**, in order to define an open directory as default directory for

- Recording **or**
- Timeshift

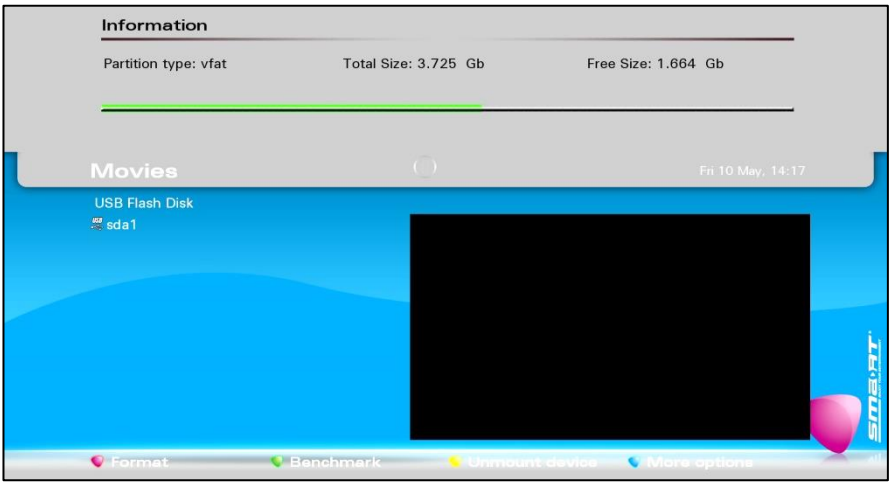
➢ Select the appropriate item with the keys ▶ and ◀ and confirm with **OK**.



➢ Press **EXIT**, in order to go back to the TV mode.

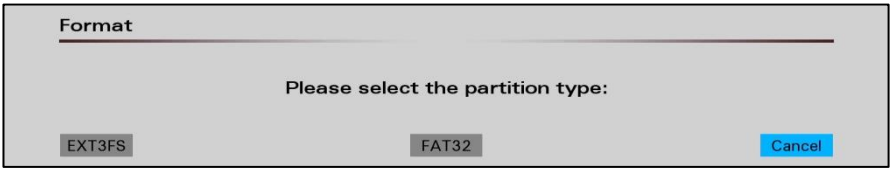
7.3.5 Formatting a storage device

➢ Press the keys ▲ and ▼ in the submenu **Recorded TV**, in order to go **Up folder** and press **OK** (probably several times). Following window opens:



In the upper part you see information regarding the USB- and/or eSATA storage device.

➢ Press the **red function key**. Following window opens:



Select with the keys ▶ and ◀ the desired file system (FAT32 – Windows or EXT3FS – Linux) or select **Cancel**.

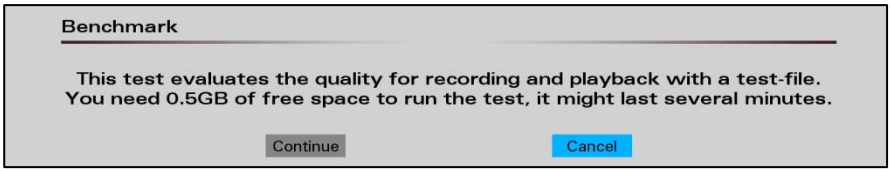
☞ For compatibility reasons smart recommends to use the file system FAT32. With FAT32 the maximum file size is 4GB. If a recording exceeds this size, the file will automatically be split in several parts.

7.3.6 Mounting/Unmounting an USB or eSATA device

➢ Press in the **information window** above the **yellow function key (Unmount device)**, in order to unmount the storage device, before unplugging it. The meaning of the **yellow function key** changes now to **Mount device**.

7.3.7 Testing a Storage Device

➢ Press in the **information window** the **green function key (Benchmark)**, in order to check the storage device speed (see help text).


Benchmark
This test evaluates the quality for recording and playback with a test-file.
You need 0.5GB of free space to run the test, it might last several minutes.
Continue
Cancel

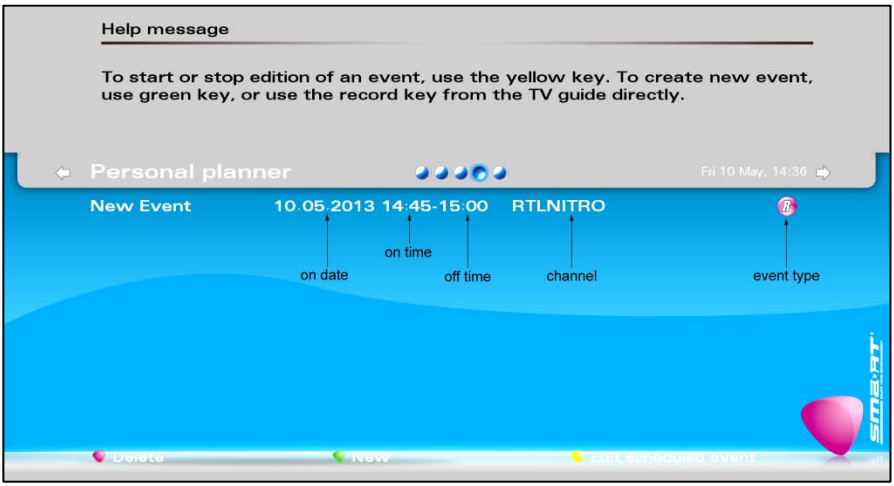
You can get the window for formatting your storage device, as well as for mounting and unmounting and for checking it also via the menu Media.

7.4 Programming a Timer

Personal Planner is the CX10/VX10 timer menu. You can program recordings, channel selections or reminders.

➢ Select the submenu **Personal Planner** and press **OK**.
or
press **INFO** and three times the key ▶
or

Press the key **USB** of the remote control. Following window opens:


Help message
To start or stop edition of an event, use the yellow key. To create new event, use green key, or use the record key from the TV guide directly.
Personal planner
Fri 10 May, 14:36
New Event
10.05.2013 14:45-15:00
RTLNITRO
on time
on date
off time
channel
event type

➢ Press **OK**, in order that this window becomes an input window.

➢ Press the **green function key**, in order to add an event.

  ➢ Navigate with the keys ◀ and ▶ to the start time, to the start date, to the end time, to the end date, to the channel and to the event settings.

7.4.1 Setting Start Time and End Time

After you selected the time, the four digits begin to flash.

1. Press **OK**, in order to set the hours.
2. Press the keys ▲ and ▼, in order to change to the right hour value.
3. Press the key ▶, in order to set the minutes.
4. Press the keys ▲ and ▼, in order to change to the right minute value.
5. Press the key ▶, in order to go to the next input field (date).

7.4.2 Setting Start Date and End Date

1. Press **OK**, in order to set the day.
2. Press the keys ▲ and ▼, in order to change to the right date.
3. Press the key ▶, in order to set the month.
4. Press the keys ▲ and ▼, in order to change to the right month.
5. Press the key ▶, in order to go to the next input field.

7.4.3 Setting the Channel

1. Press **OK**, in order to change to set the channel.
2. Press the keys ▲ and ▼, in order to change to the right channel.
3. Press the key ▶, in order to go to the next input field.

Do not press **OK** during the procedures above!

7.4.4 Setting the Event Type

➢ Press **OK**, in order to change to the setting of the event type. You'll get following window:

- Select with the keys ▶ and ◀ the button **Record**, in order to set the recording of the selected program. Press **OK** to confirm.
- Select with the keys ▶ and ◀ the button **Tune**, in order to switch to the selected program when it starts. Press **OK** to confirm.
- Select with the keys ▶ and ◀ the button **Reminder**, in order to display a notice (during the running program) when the selected program begins. Press **OK** to confirm.

7.4.5 Repeat Mode

- Press the key ▼, in order to change to the item **To take place**, where you can set the repeat mode.

> ☞ For better comprehensibility we only will explain the settings regarding this item for the event type Record.

- Select with the keys ▶ and ◀ the button **Single**, in order to record the desired program one time.
- Select **Daily**, in order to record the selected program every day at the same time. Press **OK** to confirm.
- Select **Mon-Fri**, in order to record the selected program from Monday to Friday at the same time. Press **OK** to confirm.
- Select **Weekly**, in order to record the selected program every week always at the same day. Press **OK** to confirm.

7.4.6 Ending Timer Setting

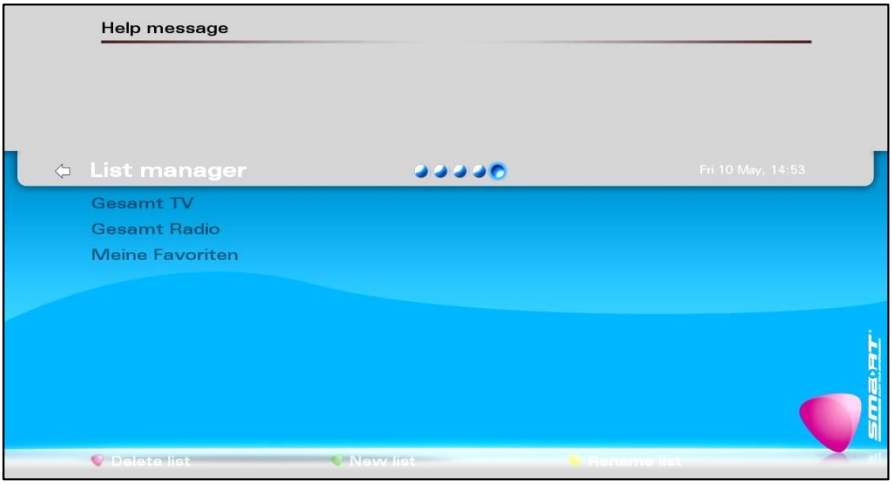
- Press the key ▼, in order to go to the button Confirm and press **OK**, in order to go back to the wind Full Guide.

7.5 List Manager

In this submenu you can delete the existing favorite lists, add new lists, rename existing lists and edit all channel lists (including your favorites list).

➢ Select in the menu **TV/Radio** the submenu **List Manager** and press **OK**
or
in TV mode press the key **INFO** and four times the key ▶, in order to go to the menu **Channel lists**.

You'll get a window with the existing channel lists and three buttons at the bottom.



➢ Press **OK** once more, in order to change to the input mode. The first channel list (*Gesamt TV*) will be marked.

7.5.1 Delete a Channel List

➢ Select with the keys ▲ and ▼ one of the shown lists and press the **red function key**, in order to delete the list completely.

> ☞ You cannot delete the channel lists, which have been created during channel search (e. g. the HD+ channel list Deutschland TV)!

7.5.2 New Channel List

➢ Press the **green function key**, in order to build a new channel list.

7.5.3 Rename Channel List

- Select with the keys ▲ and ▼ one of the shown lists and press the **yellow function key**, in order to rename the list (e. g. a new list with the default name *List1, List2,* …):
  - Press the red function key, in order to delete a character.
  - Press the keys **0 … 9** of the remote control, in order to insert letters, numbers and special characters.

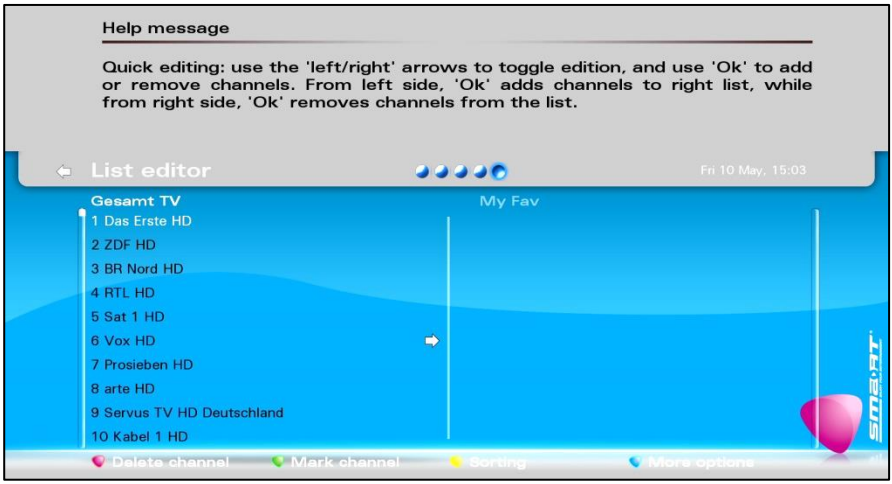
Special characters are available via multiple pressing of the keys 0 (., !, ?, &, @) and 1 (all others).

- Wait one second after each character, in order to confirm the input.
- Press **OK**, in order to confirm the new name, to leave the edit mode, and to go back to the previous window.

7.5.4 Editing Channel Lists

- Select with the keys ▲ and ▼ one of the shown channel lists and press **OK**, in order to edit them additionally.

After **OK** you'll get the List Editor including two active areas:


Help message
Quick editing: use the 'left/right' arrows to toggle edition, and use 'Ok' to add or remove channels. From left side, 'Ok' adds channels to right list, while from right side, 'Ok' removes channels from the list.
List editor
Fri 10 May, 15:03
Gesamt TV
My Fav
1 Das Erste HD
2 ZDF HD
3 BR Nord HD
4 RTL HD
5 Sat 1 HD
6 Vox HD
7 Prosieben HD
8 arte HD
9 Servus TV HD Deutschland
10 Kabel 1 HD
Delete channel
Mark channel
Sorting
More options

- Switch with the keys ◀ and ▶ to those side (channel list / favorite list), on which you want to change something.
- Mark with the keys ▲ and ▼ the channel you want to edit.

7.5.5 Adding a Channel to a Favorite List

➢ Press **OK** on the left side of the **List Editor**, in order to add the selected channel to the favorite list.

7.5.6 Deleting a Channel from a Favorite List

➢ Press **OK** on the right side of the **List Editor**, in order to delete the selected channel from the favorite list.

The order of the channels in a favorite list depends on the order of copying the channels from the channel list (is independent from the channels' positions in the channel list).

Furthermore, in the **List Editor** you have these possibilities (on both sides):

➢ Press the **red function key**, in order to delete the selected channel.

➢ Press the **green function key**, in order to mark the first of several channels. Enlarge the marking with the keys ▲ and ▼ and press once more the **green function key**, in order to set the end of the marking. Now, you can add the marked channels to a favorite list or delete them from a favorite list.

7.5.7 Sorting a Channel List

➢ Press the **yellow function key** in the **List Editor**, in order to open the sorting function described in section 7.10, page 89.

7.5.8 Moving a Channel in a Channel List

1. Press on one side of the List Editor the **green function key**, in order to mark a channel.
   ➢ Enlarge the marking with the keys ▲ and ▼, if you want to mark several channels (sequent).
2. Press the green function key once more, in order to set the end of the marking (independently whether you marked one program or several programs).
3. Press the keys ▲ and ▼, in order to select the new position of the marked channel / the marked channels in the channel list.
4. Press **OK**, in order to move the marked channel / channels.

7.5.9 More List Editor Functions

1. Mark a channel.
2. Press the **blue function key** in the List Editor. The window **More options** opens.

- Select with the keys ▲, ▼, ◀ and ▶ the desired function and press **OK** in each case.
- Select **Edit from list**, in order to set the list on the left side of the **List Editor**.
- Select **Edit to list**, in order to set the list on the right side of the **List Editor**.
- Select **Lock/unlock channel**, in order to lock the access to the marked program or to unlock it.

You can only lock a program, if you selected *before Lock Settings + Channels* for the item **Set Access Rights Level** in the submenu **Parental Control**.

- Select **Show tech info**, in order to open the window **Technical Info** (see section 7.11, page 90).

Example: Adding of a radio channel to a favorite list

1. Select the list **Gesamt Radio** in the **List manager**.
2. Press the **blue fuction key (More options)**.
3. Press ► to mark **Edit to list**.
4. Press ◄/► to select the favorite list, to which you want to add the channel and confirm with **OK**.
5. Press **BACK** to get to the lower part of the screen.
6. Press ◄/► to select a channel (left side of the screen).
7. Press **OK** to add the channel to the favorite list (right side of the screen). Repeat this step if necessary to add other channels.

7.6 Guide

The submenus **Today, Tomorrow,** … in the menu **Guide** offer for every day direct access to the EPG.

➢ Select with the keys ◀ and ▶ one of the seven weekdays and press **OK**. The window **Full Guide** (for each day) opens (see paragraph 0, page 46).

7.7 Media Player

Via the menu **Media** you can play own TV recordings as well as audio, video and image files (photos), which are stored on a connected storage device (USB or eSATA) or on a shared network folder in your home network. How to share a folder or a drive in a Windows network is described in section 7.7.3 on page 68.

The CX10 and VX10 can play this formats:

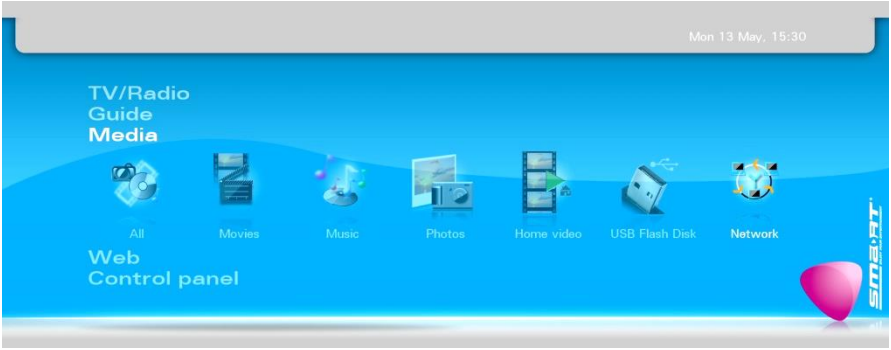
Audio	Video	Photo
• MP3	• AVI • MKV • MP4	• JPG • GIF • PCX

The list of supported formats may be extended by software updates.

➢ Ensure that a storage device containing the files you want to play is plugged in or that the receiver is connected to a home network

➢ If you want to play files stored on a network drive, make sure you have set the network settings accordingly (see section 7.9.6, page 81).

➢ Navigate to the menu **Media**.



The submenu **Network** is only available after corresponding selection in the menu **Control panel/Network/Network files**.
With connected storage device (USB or eSATA) you have additional submenus **USB Flash Disk or ATA ...**.
If both external devices are connected, you will get the submenu **Network** only after pressing the keys ◀ or ▶.

- After selecting the submenu **All** and subsequent **OK** all the files on the connected storage devices (which can be only one) and all files on shared network folders will be displayed.
- After selecting the submenu **USB Flash Disk** and subsequent **OK** all files on the connected USB storage device will be displayed.

➢ In TV mode press **STOP** to show all files on the connected USB storage device.

- After selecting the submenu **ATA ...** and subsequent **OK** all files on the connected eSATA disk will be displayed.
- After selecting the submenu **Network** and subsequent **OK** all files on shared network folders will be displayed.

➢ Select one of the submenus **All**, **Movies**, **Music**, **Photos** or **Home video** according to the type of the file you want to play and press **OK**. The folder tree now only shows the files that correspond to the desired file type.

Only if you have selected, for example music, you will see existing music files.

7.7.1 Network streaming

There are two basic requirements to be met for network streaming, i. e. the playback of files on a shared network folder:

7.7.1.1 Password

Assign a password to the user who is logged on the computer where the file to play back is located. To identify the computer in the network this is mandatory.

7.7.1.2 Firewall

For smooth streaming process, you must also ensure that the receiver is not blocked by a firewall. To prevent this, but keep the firewall activated, you need the IP address of the receiver (as seen via **Menu / Control panel / Network / Status** after the receiver has connected to the network) entering under *allowed addresses* (or similar).

7.7.2 Receiver Settings for Streaming

1. Connect the receiver to a home network (as described in section 4.6 “Connecting a Home Network (optional)“.
2. Go to Control panel / Network and press OK.
3. Ensure that **Network service** is *On*. Change the value if necessary.
4. Go to **Network files** and press **OK**. The window **Network files** opens.
5. Select **Network files** and press **OK**. Select the value *An* with the keys ▲ und ▼. Press once more **OK**, to go back to the window **Network files**.
6. Select **Auto-reconnection** and press **OK**. Select the values *An* or *Aus* with the keys ▲ und ▼, depending on whether you want the receiver connecting to your home network automatically after booting. Press once more **OK**, to go back to the window **Network files**.
7. Select **Network login** und and press **OK**. Insert the name of the computer containing the file to be played back with the numeric keys of the

remote control, the sliderX[15]-keyboard or a connected USB keyboard. The input format should be:
Workgroup ***or*** *Domain/Computername*
Example.:
The file to be played back is located in a shared folder of the computer with the IP address 192.168.178.30 in the workgroup „Company1“. Insert Company1/192.168.178.30 under **Network login** and press **OK** to go back to the window **Network files**.

8. If your share requires a password, select **Network password** and press **OK**. Now use the numeric keys of the remote control, the sliderX keyboard or an external USB keyboard to enter the login password of the computer that hosts the file to play. If no password is required, this field remains empty. Press **OK** to return to the window **Network files**.
9. Press the green function key twice to confirm your entries and return to the Settings menu.
10. Turn off the receiver using the power switch on the back. Turn on the receiver again. Now, under **Media / Network** you see the computer that hosts the shared file or folder.
11. Press **OK** to see the shared file or folder.

7.7.3 How to Share Folders and Drives

Here we describe the folder sharing in a windows home network while using a computer with Windows 7 Professional or Windows XP Professional. If you are working with a different operating system (Mac OS, Linux) or a NAS[16] drive, please refer to the respective manual for the right procedure.

For other Windows operating systems, the sharing of folders is similar, but often there is no possibility of detailed security settings!

[15] sliderX = 4 in 1 universal remote control which is available as an accessory for the smart receivers CX10, VX10 and Zappix HD+.
[16] NAS = Network Attached Storage, storage device (hard disk) which is directly connected to the network

7.7.3.1 How to Share Folders and Drives with Windows XP

Share Settings

1. Right-click the folder that you want to share, and then click *Properties*.
2. Select the *Sharing tab*.
3. Click the Share This Folder option.
4. Type the *Share Name*.
5. Click Permissions.
6. Set for the group *Everyone* the desired permissions and confirm all menus. If you only want to stream, i. e. playback via the receiver, in most cases only *read permissions* are necessary. If the group *Everyone* does not exist, click on *Add…*, type *Everyone* in the object names box, click on *Check names* and confirm all inputs.

File System Permissions

Additionally you must set the proper permissions directly in the file system:

1. Right-click the file or folder you want to share.
2. Click Properties.
3. Select the *Security* tab.
4. Check whether in the names box the group *Everyone* is existing. If the group *Everyone* does not exist, click on *Add…*, type *Everyone* in the object names box, click on *Check names* and confirm all inputs.
5. Set for the group *Everyone* the desired permissions and confirm all menus. If you only want to stream, i. e. playback via the receiver, in most cases only *read permissions* are necessary.

7.7.3.2 How to Share Folders and Drives with Windows 7

With the introduction of **Windows 7**, Microsoft has changed the security concept. Sharing of any folder / drive is very complex, if you are using a device that does not support Windows 7 (for example a PC with an earlier version of Windows or a Linux PC, the smart receiver). To share a folder a number of steps are necessary:

Share Settings

1. Right-click the folder that you want to share, and then click *Properties*.

2. Select the *Sharing tab*.
3. Click the button *Advanced Sharing*.
4. Click the Share This Folder option.
5. Type the *Share Name*.
6. Click Permissions.
7. Check whether in the names box the group *Everyone* is existing. If the group *Everyone* does not exist, click on *Add*..., type *Everyone* in the object names box, click on *Check names* and confirm all inputs.
8. Set for the group *Everyone* the desired permissions and confirm all menus. If you only want to stream, i. e. playback via the receiver, in most cases only *read permissions* are necessary.

File System Permissions

Additionally you must set the proper permissions directly in the file system:

1. Right-click the file or folder you want to share.
2. Click Properties.
3. Select the *Security* tab.
4. Click *Edit*.
5. Click *Add*.
6. Type *Everyone* in the textbox and confirm the menu.
7. Set for the group *Everyone* the desired permissions and confirm all menus. If you only want to stream, i. e. playback via the receiver, in most cases only *read permissions* are necessary.

Disable Password Protection

You need to ensure that the access is allowed from other PC with one user name and one password.

1. Open the Control Panel.
2. Click *Home group*; (if you are in category view it's directly on the first page, if you are in symbol view open *Network and Sharing Center*).
3. Click Advanced Sharing Settings.
4. Open the active profile (probably *home* or *work)*.

5. Scroll until you see password protected sharing.
6. Switch off *password protected sharing* and confirm all.

If you can adjust security settings for the user group *Everyone*, your home network does not include several workgroups or domains and your sharing is not password protected, you can insert what you want for **Network login– but the Field must not be empty!**

7.7.4 Example Music

➢ Select with the keys ▲ and ▼ the file you want to play (you open a directory with **OK**).

If you are already in a subdirectory, you go to the parent directory by selecting the icon "**. .**".

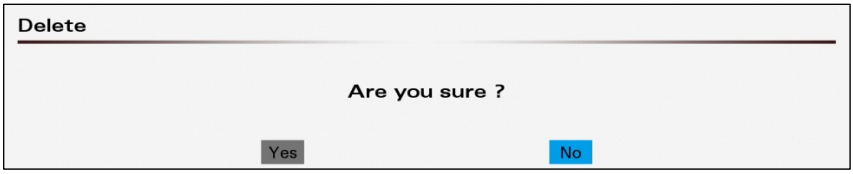
➢ Press **OK**, in order to start playback (or press the key ⏯).

➢ Use the keys ⏪, ⏩, ⏯ and ⏹ to control the playback.

In order to go quickly to a certain point in an audio or video file, use the keys ⏮ and ⏭ (13). Keep the key pressed until the desired position is reached. Do you release the key, the device conducts synchronization and playback starts.

➢ Via the buttons at the bottom of the media player window further options are available.

➢ Select with the keys ▲ and ▼ a music file and press the **red function key**, in order to delete the file. Following window opens:



➢ Select with the keys ◀ and ▶ **Yes** or **No** and confirm with **OK**.
If you select **Yes** the file will be deleted and you get back to the

previous window.
If you select **No** only the current window will be closed.

- Select with the keys ▲ and ▼ a music file and press the **yellow function key**, in order to enter the edit mode, in which you can rename the file:
  - Press the **red function key**, in order to delete a character.
  - Press the keys **0 … 9** of the remote control, in order to insert letters, numbers and special characters.
  - Wait one second after each character, in order to confirm the input.
  - Press **OK**, in order to confirm the new name, to leave the edit mode and to go back to the previous window.

Do not change the file suffix (e. g. .mp3), in order to ensure that the file is recognized as music file and played back properly.

- Press the **blue function key**, in order to define an opened directory as standard directory for recording or time shift (see section “Setting Default Directories…”, page 79).

7.7.5 Example Photos

The basic procedure for image files is similar to those for music files.

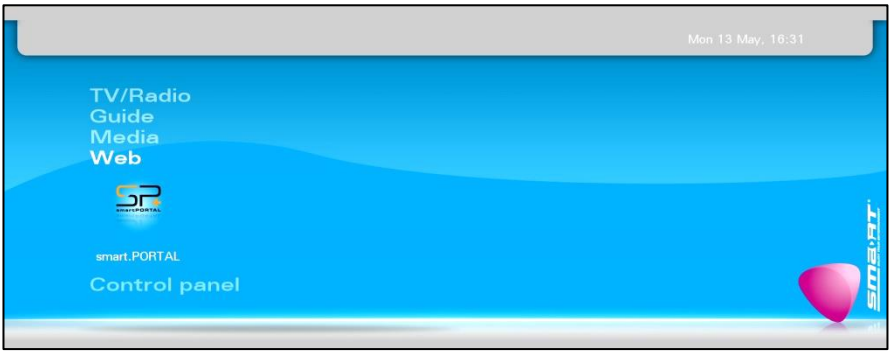
- Press **OK**, after you selected an image file, in order to show a preview of the image.
- Press **OK once more**, in order to show the image in full screen format.
- Press ⏯, in order to start a slide show of all images in the selected directory.

7.8 Web

The speed of displaying content from the Internet depends on many factors, e. g.

- The internet access speed,
- the number of current users on a dial-in node
- the transmitted data volume via this dial-in node .

Using the menu **Web** you have access to the **smartPORTAL** and thus to a variety of Web services such as weather forecast, audiobooks, music, video portals, magazines, over 300 web radio stations and much more.



Press the **yellow function key** in order to directly access the smart portal from TV mode.

The smart web offerings are continuously enhanced. For details, visit www.smart-electronic.de.

7.9 Control Panel

In the menu **Control Panel** you can adjust many parameters in several sub-menus for the operation of the CX10/VX10 and view the current settings.

1. Navigate to the menu **Control Panel**.
2. Press **OK**. Basically, the procedure is always the same:
3. Open a submenu with **OK**. A two-part window is displayed: the left side contains several menu items with the currently set value; the right side of the window is empty.
4. Select with the keys ▲ and ▼ a menu item and confirm with **OK**. On the right side now all selectable values are shown.
5. Select with the keys ▲ and ▼ a value and press **OK**, in order to take this value. Now you have the possibility to edit other menu items in the same submenu with the keys ▲ and ▼.
6. Press the **green function key**, in order to confirm the changes and to go back to the menu **Control Panel**.

Press the **red function key**, in order to go back to the menu **Control Panel** discarding the changes.

7.9.1 User Preferences

7.9.1.1 Default State of the Receiver After Power-Up

- Select **Start-up mode** to define, whether your CX10/VX10 starts up with the live-TV screen or whether there is already the menu opened („Lobby“).

7.9.1.2 Number of Channels in the Channel Memory

- **Select “Last“ history depth, in order to set how many channels are stored in** the channel memory. Whenever you see a channel a few seconds, this is then stored in memory. Use the **RECALL** key to call easily after maximum five switching operations one of these channels.

7.9.1.3 Setting the Energy mode

- Select **Energy mode**, in order to set the energy mode being used in standby mode:

Energy mode	Meaning
Economic	Minimum power consumption, longer start-up time
Light standby	Middle power consumption, middle start-up time
Rapid start-up	Higher power consumption, very short start-up time

7.9.1.4 User Interface

- Select **User interface** and press **OK** to set the appearance of the menu windows.

7.9.1.4.1 Background Image

- Select **Interface color scheme** to set the background image of the OSD. You can select between *Default* and *Skin1*.

7.9.1.4.2 OSD Transparency

- Select **OSD transparency** to set the transparency of the info window and the quick access menus. You can select between these values: *100% (opaque), 90%* and *80%.* Default value is *100%.*

7.9.1.4.3 Pop-Up Menus Duration

➢ Select **Pop-up menus duration**, in order to set the time, how long the **info window** (see section 5.9.5, page 37) and other info text is displayed. You can select the values *3s, 6s* und *9s.* Default value is *3s.*

7.9.1.4.4 EPG Font Size

➢ Select **EPG font size**, in order to set the font size in the **Full Guide** window. Default value is *small*.

7.9.1.4.5 Menu Font Size

➢ Select **GUI font size**, in order to set the font size in the menu windows. Default value is *small*.

7.9.1.5 Quick View Window Behavior

➢ Select **Quick Tuning**, in order to set, whether in the **Quick view** window (see section 5.9.1, page 33) the channel should switch with the selection of a channel (*On*) or whether you must press **OK** to switch (*Off*).

7.9.1.6 Getting Informed About Existing HbbTV Content

➢ Select **HbbTV Applications**, in order to set, how you want to be informed about existing HbbTV content or how you want to use it. There are these options:

Value	Description
Disabled	HbbTV contents (or just the availability of HbbTV contents) are **not** displayed.
Auto-start	Immediately after channel switch you'll get the „HbbTV-indication"-button (e. g. for most German channels it is „Einblenden"), the keys for Navigation and the function keys are assigned to the HbbTV content (the receiver operation may be restricted).
Notify	In the info window you'll get an icon ( ), if the selected channel contains HbbTV content.
Auto-Red	Similar to *Auto-start*; until you open the HbbTV application the keys for Navigation and the function keys except the red function key are reserved for the receiver operation.

7.9.1.7 Automatic Standby-Mode

- Select **Auto Standby** to set, whether the receiver should automatically switch to standby mode, when there isn't any key pressed for a certain time.

7.9.1.8 Functions for the Keys FAV, EPG and HELP

There are default functions for the keys **FAV**, **EPG** and **HELP**. Nevertheless you can assign other functions.

7.9.1.8.1 Function of the Key FAV

- Select **key 'FAV'** to set the function for the key **FAV**:

Value	Meaning
FAV	**Choose default list** (section 5.9.2, page 34), default function
Planner	Personal Planner (section 5.9.16, page 48)
Web portal	Internet applications (section 7.8, page 72)
Library	Open the menu **Media / USB** … (section 7.7, page 65)

7.9.1.8.2 Function of the Key EPG

- Select **key 'GUIDE/EPG'** to set the function for the key **EPG**:

Value	Meaning
TV guide	Open the EPG (section "Full Guide", page 46), default function
single channel guide	Open the **Quick view** (section 5.9.1, page 33)

7.9.1.8.3 Function of the Key HELP

- Select **key 'HELP'**, in order to set the function for the key **HELP**:

Value	Meaning
WEB help	Opens the VX10/CX10 support website, default function
WEB portal	Opens the smart portal

7.9.1.9 Automatic Playback of a Multimedia File

➢ Select **Auto playback** to set,
whether the playback of a multimedia file (audio, video, photo) starts only by selecting the file (*On*)
or
whether you must press ► or **OK** to start the playback (*Off*)
or
whether playback starts with 3 seconds delay after selecting the file (*3 sec*). When playing a TV recording, you already see captured EPG data during these 3 seconds.

7.9.1.10 Leaving the Menu "User preferences"

If you leave during the change process the submenu **User preferences** with **EXIT**, a query appears:

➢ Select with the keys ◄ and ► your answer and confirm with **OK**.

- *Yes:* The changes you did already were saved and you go back to the menu **Control Panel**.
- *No:* The changes you did already were discarded and you go back to the menu **Control Panel**.
- *Cancel*: No action, you stay in the submenu **User preferences**.

7.9.2 Time / Date

➢ Select **Automatic time update**, in order to set whether the receiver takes over the system time of the satellite signal (*On*), or whether you want to enter the time manually (*Off*).

Select *On* if you want to use HD + programs in future!

➢ Select **Date**, in order to enter the current date:

The menu item **Date** is only active, when you selected **Automatic time update** *Off*!

1. Select with the key ▶ day, month and year and change with the keys ▲ and ▼ to the right values.
2. Press **OK**, in order to complete the date entry.

➢ Select **Local time**, in order to insert the current time:

The menu item **Local time** is only active, when you selected **Automatic time update** *Off*!

1. Select with the key ▶ hours and minutes and change with the keys ▲ and ▼ to the right values
2. Press **OK**, in order to complete the time entry.

➢ Select **Time zone**, in order to set the time zone, where you are (where you operate the receiver). For Germany e. g. the right value is *Amsterdam GMT+1*.

➢ Select **Auto-daylight saving time** (*On* / *Off*), in order to set whether the system time should automatically adjusted according the daylight saving time (daylight saving time from the last Sunday in March until the last Sunday in October)

➢ Select **Daylight saving time**, in order to adjust the system time according the Daylight saving time manually.

The menu item **Daylight saving time** is only active, when you selected **Auto-daylight saving time** *Off*!

7.9.3 Languages

➢ Select **Menu Language**, in order to set the OSD language.

➢ Select **Primary sound track language**, in order to set the default language for programs with multi-channel sound.

The CX10/VX10 default value is *Deutsch*.

➢ Select **Primary subtitle language**, in order to set the language of broadcasted subtitles.

Whether the selected language is really played, depends on whether the current program with multichannel sound contains this language.

The same applies analogously to **Primary subtitle language**.

7.9.4 Recording

7.9.4.1 Setting Lead Time and Overrun Time

- Select **Start guard buffer**, in order to set with the keys ▶ and ◀ the minutes a recording should start earlier than set in the **Personal Planner**.
- Select **End guard buffer**, in order to set with the keys ▶ and ◀ the minutes a recording should stop later than set in the **Personal Planner**.

7.9.4.2 Setting Default Directories for Recordings and Timeshift

- Select **Default Record Folder** to get advice in which menu you can set the default directory for recordings.
- Select **Default Timeshift Folder** to get advice in which menu you can set the default directory for timeshift.

7.9.4.3 Channel Change During Recording

- Select **Independent Watch & Record** to set, whether the receiver always shows the program that is been recorded or not:
  On Channel change is possible (default)
  Off Channel change is not possible.

7.9.4.4 Recording Subtitles

- Select **Record with Subtitles** to set, whether you want to record subtitles (which are then also available during playback).

7.9.4.5 Recording Audio Tracks

- Select **Record with Audio Tracks** to set, whether you want to record all broadcasted audio tracks (which are then also available during playback).

7.9.4.6 Recording Teletext

➢ Select **Record with Teletext** to set, whether you want to record broadcasted teletext data (which are then also available during playback).

7.9.4.7 Power at the USB Port

You can set, whether a connected USB hard drive (without own power supply) should be in operation during standby.

➢ Select **USB Power in Standby**, to switch on or off the 5V voltage at the USB port during standby.

If you selected *Off* and a Timer which is programmed for recording starts the receiver, there is one minute lead time in order to save enough time to initialize ("boot up") the HDD.

7.9.4.8 Blocking the menu during recording

➢ Select **Recording Protection**, to set, whether the menu can be called during recording.

On the menu cannot be called during recording.

Attention!

Calling of certain menu items and functions, can lead to dropouts in the recording or to a termination.

7.9.5 Parental Control / Pin Code

➢ Select **Change Pin Code**, in order to set the PIN[17]. The PIN allows you to restrict the access to channels and menus.

The default value for the Pin code is *0000*.

➢ Select **Restrict content rating**, in order to restrict the access to channels with limited FSK-approval[18].

[17] PIN = **P**ersonal **I**dentification **N**umber, secret numeric password
[18] FSK = **F**reiwillige **S**elbstkontrolle der **F**ilmwirtschaft (German) = Voluntary Self-Regulation of the Movie Industry, FSK approval: e. g. rating of a film according to the youth protection law

Example: If you set the value to *12 years old*, during the further operation channels will be blocked, broadcasting currently programs with a higher FSK approval (16, 18).

The function **Restrict content rating** can only be used, when this service is provided by the provider, i. e. programs must contain a flag for the FSK approval.

➢ Select **Set Access Rights Level**, in order to restrict the access to channels or menus with the PIN.

7.9.6 Network

➢ Select the submenu **Network** in the menu **Control panel** and press **OK**.

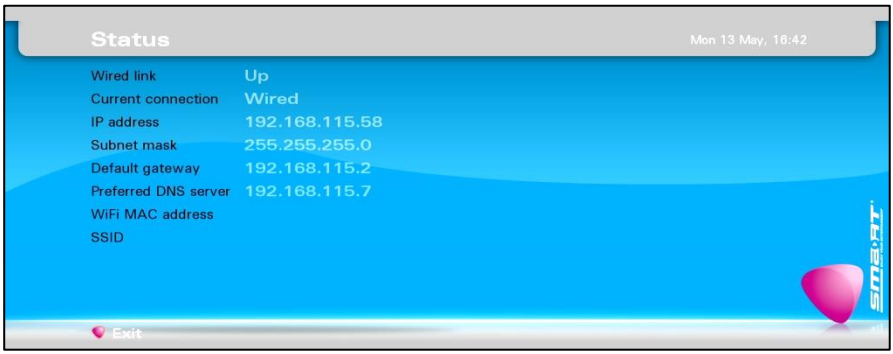
7.9.6.1 Wired Network – LAN

1. Select **Wired network** to set a wired network connection (LAN). After **OK**, you'll get the window **Wired network**.
2. Select **Auto IP config** to set,
   whether you want to configure the network manually
   or
   whether this should be done automatically via **DHCP**[19].

7.9.6.1.1 Automatic LAN Configuration

1. Select *DHCP* for **Auto IP config**.
2. Then press the **green function key (Connect)** to make the connection. After the connection is established, the status window will appear:

[19] DHCP = Dynamic Host Configuration Protocol (engl.), ermöglicht die Zuweisung der Netzwerkkonfiguration an Clients (z. B. Receiver) durch einen Server (im Router enthaltener DHCP-Server)



3. Press the **red function key (Exit)** or **BACK**, in order to go back to the previous window. Press **EXIT**, in order to leave the menu.

7.9.6.1.2 Manual LAN Configuration

1. Select *No* for **Auto IP config.**
2. Enter the network parameters:
   IP address,
   Subnet mask,
   Default gateway and
   Preferred DNS server,
   by selecting the relevant parameters, entering the appropriate value with the numeric keypad and clicking **OK**.
3. Press the **green function key (Connect)**, in order to connect to the network. Whether this is successful will be displayed in the status window (see above).
4. Press the **red function key (Exit)** or **BACK**, in order to go back to the previous window. Press **EXIT**, in order to leave the menu.

7.9.6.2 Wireless Network – WLAN

➢ Press **Wireless network**, in order to configure a wireless network connection (WLAN, only VX10).

➢ If you operate your CX10/VX10 the first time you have to select **Manually connect to a wireless network** (**Automatic Search for wireless networks** is not selectable).

7.9.6.2.1 Automatic WLAN Configuration

➢ Select **Automatic search for wireless networks**. After **OK** the receiver looks for the wireless network you gave during first install and establishes the connection.

7.9.6.2.2 Manual WLAN Configuration

➢ Select **Manually connect to a wireless network**. After **OK** the receiver looks for the wireless network looks for the available wireless networks.

1. Select your network and press **OK**. Beside the network connection you should insert your key / password.
2. Insert your WLAN key with the numeric keys of the remote control and press **OK**, in order to confirm your entry.
3. Press the **green function key (Connect)**. The receiver connects with the network. At the top of the screen it is indicated if the connection is established successfully.

7.9.6.2.3 Connecting to a hidden wireless network

1. Select **Connect to a hidden wireless network**. The window **Connect to a hidden wireless network** opens.
2. Select **SSID**[20], press **OK**, and enter the network name.
3. Select **Security** to set the encryption method.
   You can select between *None, WEP, WPA, WPA2*.
4. Press the **red function key (Exit)** or **BACK**, in order to go back to the previous window. Press **EXIT**, in order to leave the menu.

7.9.6.2.4 WLAN: fixed IP Address or DHCP

➢ Select **Auto IP config** to set,
whether you the receiver shoul have a fixed IP address in the wireless network (*No*)
or
whether the IP address should be given via **DHCP** (*DHCP*).

7.9.6.3 Showing Network Connection Parameters

➢ Select **Status,** in order to open the **Status** window (see above).

[20] **S**ecure **S**et **I**dentifier (engl.) = Netzwerkkennung

7.9.6.4 Activating a Network Quality Control

➢ Select **Network service**, in order to activate a network quality control.

7.9.7 Channel Search

7.9.7.1 Satellite Search

In the submenu **Satellite Search** you can create overall channel lists (TV and Radio) for one or for several satellites.

➢ Select **Scan mode**, in order to set the way of creating a new overall channel list:
Quick Scan: searches all channels which are available from a satellite.
HD+: the HD+ channel list will be used.

➢ Select **Channels**, in order to set, whether only FTA[21] or all channels should be searched.

➢ Select **Satellite**, in order to set, which satellites should be included in the search.

Which satellites are selectable here, is set in the submenu Antenna (see section 7.9.12, page 87).

➢ Press the **green function key (Start Search)**, in order to start the channel search.

7.9.7.2 Advanced Channel Search

In the submenu **Advanced Channel Search** you can search for channels of a certain transponder.

➢ Select **Satellite**, in order to select the satellite, where the transponder is located.

Which satellites are selectable here, is set in the submenu Antenna (see section 7.9.12, page 87).

➢ Select **Frequency**, in order to set the transponder frequency.

➢ Select **Polarity**, in order to set the polarization of the desired channel.

➢ Select **Symbol Rate**, in order to set the symbol rate of the desired channel.

[21] FTA = **F**ree **T**o **A**ir = unscrambled channel

- Select **DVB-S2**, in order to set, whether you look for a HD channel (DVB-S2) or a SD channel (DVB-S).
- Select **FEC**, in order to set the FEC mode.

If you set the FEC mode (i. e. do not leave it *Automatic*), the search will be simpler and the search time will be shorter.

- Select **PIDs**, in order to set the PID values. If you do not know them, set the value to *Automatic*. Then the PIDs provided by the broadcaster will be used.
- Only if you select *manual*, you can insert values for **Video PID**, **Audio PID** and **PCR PID** with the numeric keys of the remote control
- Select **Channels**, in order to set, whether only FTA or all channels should be searched.

7.9.8 Factory Settings

The access to the submenu **Factory Settings** is always protected by the PIN (independently from the settings in **Parental Control**).

- Select **Factory Defaults**, in order to reset the receiver (to set the delivery status).
- Select **Preprogrammed Channel Lists**, in order to set *Standardliste* or *Blankoliste* as default channel list (see section 5.3.1, page 26).
- Select **Export settings to USB**, in order to save settings and channel lists to a USB storage device.
- Select **Import settings from USB**, in order to load settings and channel lists from an external a USB storage device.

7.9.9 System Update

- Select the submenu **System Update**, in order to update the receiver software (see section 5.5, page 28).

- Please, ensure that the receiver is connected to the internet, if you want to update the receiver software online.

7.9.10 System information

Here you can get various information regarding your CX10/VX10.

Especially if you want to contact the smart service hotline, you should know the receiver's software version.

7.9.11 Audio / Video

7.9.11.1 Digital Audio Out

➢ Select **Digital Audio Out**, in order to switch the digital audio out between *Stereoy (downmix)* and *Dolby bitstream*[22].

Value	Meaning
Stereo (downmix)	The multichannel audio signal is reduced to two channels.
Dolby bitstream	The audio signal is available in multichannel format to be transferred to a multichannel amplifier.

If a DTS signal is transmitted, this is available at the SPDIF output (Digital Audio Out must be set to *Dolby bitstream*).

7.9.11.2 HDMI Output

➢ Select **HDMI Output**, in order to switch the HDMI output signal between *RGB*, *YPbPr 4:4:4* and *YPbPr 4:2:2*.

➢ Please, follow the instructions of your TV manual for proper adjustment.

7.9.11.3 TV Scart

➢ Select **TV Scart**, in order to switch the Scart output signal between *RGB and* FBAS.

7.9.11.4 HDCP

➢ Select **HDCP**, in order to select, whether the HDMI signal should be transferred with a HDMI security code.

[22] Gemeint ist das Dolby Digital Mehrkanal-Tonsystem (auch bekannt als Dolby Digital, AC3)

If you turn off HDCP (for example, because your TV set cannot handle HDCP signals), certain playback functions may be blocked.

7.9.11.5 Disable Analog Video Output

➢ Select **Analogue video output** to select,
whether you want to deactivate the analog video outputs completely (*Off*)
or
whether only the pure video signal (without OSD information windows) should be available. Press the key **16:9**, in order to undo the deactivation.

The deactivation of the analog outputs (Scart), you can increase the quality of the Internet presentation.

When recording with an external video recorder you can avoid distracting video overlays by selecting the menu option *Video*.

7.9.11.6 Adaptive Scan HDMI

➢ Select **Adaptive Scan HDMI** to select whether the refresh rate on the HDMI output should be adjusted to the refresh rate of the film material (24Hz, 25Hz, 50Hz, 59.94 Hz, 60 Hz). However, this can lead to an image loss of 2-5 seconds each time you start playback. The adjustment is suitable when playing NTSC recordings (59.94 or 60 Hz) and movies (24 Hz), for which a frequency of 50 Hz is not optimal.

You can choose between *Off, 50/60 Hz* und *24/50/60 Hz*
Off: no adjustment
50/60 Hz: adjustment between 50 and 60 Hz (Europa / USA)
24/50/60 Hz: adjustment between 24, 50 and 60 Hz.

7.9.12 Antenna

The settings made by smart (factory-settings) are valid for a standard satellite system. Any additional system features (like multi-feed LNB, unicable system ...) need to manual adjustments in the submenu **Antenna**:

[16:59:32] Stephan S.: gibt es deinerseits noch Änderungswünsche zum jetzigen PM Entwurf?

➢ Leave the settings in this menu to a professional.
For normal use, you do not have to make any settings here.

With the help of the indication of signal quality and signal strength you can verify your entries immediately.

➢ Select **LNB Type**, in order to select *Universal* LNB or *Unicable* LNB.

➢ Select **Satellite**, in order to select the satellite, for which you want to change the settings.

  ➢ Press the **green function key (Insert satellite)**, in order to increase the list of satellites.

➢ Select **LOF Low Band**, in order to define the LOF Low Band value (depends on the LNB).

➢ Select **LOF High Band**, in order to define the LOF High Band value (depends on the LNB).

➢ Select **Band Switching**, in order to set, whether the switch between Low Band and High Band should be done automatically.

➢ Select **DiSEqC type**, in order to set the used DiSEqC mode: *Mini DiSEqC*, *DiSEqC 1.0* or *DiSEqC 1.1*.

➢ Select **DiSEqC input**, in order to set, which DiSEqC input should be valid for a selected satellite. Depending on the DiSEqC mode you have these options:

DiSEqC mode	Inputs
None	Not selectable
Mini DiSEqC	A, B
DiSEqC 1.0	A, B, C, D
DiSEqC 1.1	1, 2, 3, 4, 5, 6, 7

➢ Select **Ref. Transponder**, in order to set the transponder, which should be used to evaluate signal quality and signal strength (i. e. the transponder, which provides your preferred channel)
or

➢ Select **Frequency**, in order to insert with the numerical keys of the remote control the frequency of the reference transponder.

7.9.13 Smartcard

Since the CX10/VX10 is a HD+ receiver, a smartcard bay is available.

You can remove the smartcard at any time or insert it without turning off the receiver.

➢ Insert the smartcard **with the chip down** carefully until the contacts inside snap into place.

After the smartcard is inserted, the corresponding channel can be selected. It may take a few seconds, until the channel is unlocked.

In the CX10/VX10 smartcard bay you can only insert HD+ smartcards!

When you first select a HD+ channel, the HD+ card is activated for 12 months! When these first 12 months are over, you have to extend the HD+ subscription with Astra HD+. With the extension of the subscription you give your HD+ card number; then an activation code is sent via satellite.

7.9.14 RAPS Config

➢ Select **RAPS Config**, in order to set,

a) Whether after reset to factory defaults the channel list will be created from scratch or whether it only will be updated and

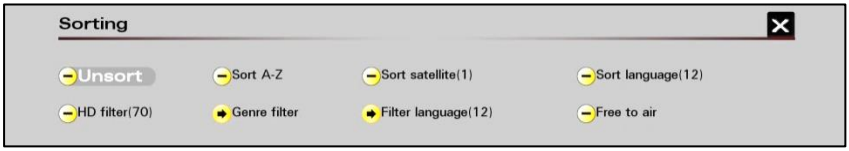
b) Whether automatic updates will be performed.

The access to the submenu **RAPS Config** is always PIN-protected (independently from the settings in the submenu **Parental Control**).

7.10 Sorting Channels

1. Press the remote control key **EPG**.
2. Press die **yellow function key**, in order to open the window **Sorting** on top of the EPG window **Full Guide**.
   Dependent on your installation (with RAPS or without RAPS), you'll get

different windows **Sorting**
e. g. with RAPS:



In TV mode you can press the blue function key, in order to access directly the sorting function.

3. Press the keys ◀, ▶, ▲ and ▼ in order to select the desired sorting function and confirm with **OK**:
   - *Unsort*: the channel list is displayed unchanged.
   - *Sort A-Z*: all channels will be displayed in alphabetical order.
   - *Sort Satellite*: all channels will be displayed sort by the transmitting satellite.
   - *Sort Language*: all channels will be displayed sort by the broadcasted language.
   - *Sort. CAS*[23]: all channels will be displayed sort by the channel type FTA or „scrambled“.
   - *HD filter*: only HD channels will be displayed.
   - *CAS filter*: the window **CAS filter** opens:
     Select with the keys ◀, ▶, ▲ and ▼ a kind of scrambling and confirm with **OK**.
     Now, only channels with this kind of scrambling and FTA channels will be displayed.
   - *Genre filter:* the window Genre filter opens.
     Select with the keys ◀, ▶, ▲ and ▼ a Genre and confirm with **OK**.
     Now, only channels which belong to this Genre will be displayed.
4. Press **EXIT**, in order to leave the EPG window and to go back to normal TV operation.

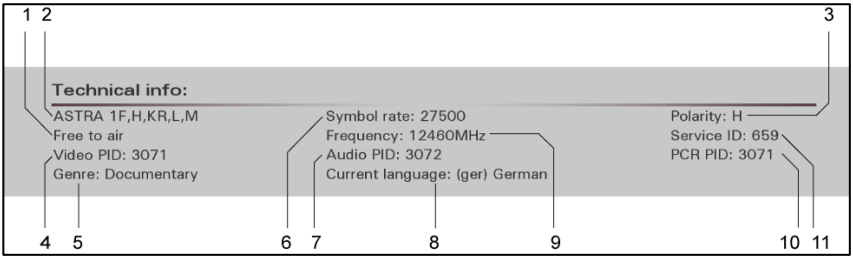
7.11 EPG More options

1. Press the remote control key **EPG**.

[23] CAS = Conditional Access Sender = scrambled broadcasting

2. Press die **blue function key**, in order to open the window **More Options** on top of the EPG window **Full Guide**:

3. Select with the keys ◀ and ▶ the desired function.
   - **Show tech info** opens this window:



No.	Item	Meaning
1	FTA	Free To Air (not scrambled)
2	ASTRA 1F,H,KR,L,M	Satellite name
3	Polarity: H	Polarization of the satellite signal H = horizontal, V = vertical
4	Video PID: 3071	Each table or each elementary stream in a transport stream is determined by a 13 bit PID.
5	Genre: Documentation	Shows the kind of programs on the current channel
6	Symbol Rate: 27500	Symbol Rate in MHz
7	Audio PID: 515	See "Video PID"
8	Current Language	Default language for programs with multi-channel sound
9	Frequency: 12460 MHz	Frequency in MHz

No.	Item	Meaning
10	Service ID: 61201	For each channel there is a unique number.
11	PCR PID: 6110	PCR = Program Clock Reference, built on the PIDs, necessary that the decoder works properly.

- **Edit scheduled event** opens the programming window of the **EPG**, where you can program recordings, channel selection or reminders (see section 6.2, page 50).

4. Press **EXIT**, in order to leave the EPG window and to go back to normal TV operation.

7.12 Using USB Input Devices (Mouse, Keyboard)

For your convenience you can operate a USB keyboard with the CX10/VX10.

For easy navigation on smartPORTAL pages (Internet), it may be helpful to have a mouse available.

In some cases (e. g. if alphanumerical entries are necessary), it can be reasonable to use, a complete keyboard, additionally with the remote control.

In the menus/submenus keys are available with these functions:

Taste	Bedeutung
Numbers 0 … 9	
Letters	
←→↑↓	Navigation in the menu or change of a value
RETURN key	**OK**

In the Internet application you can use these keys:

Taste	Bedeutung
Numbers 0 … 9	
Letters	
Shift key	Upper / lower case
Space bar	
Deletion key Del	
RETURN key	
TAB	Go to next field
Alt + TAB	Go to previous field
F3	Go to previous page
F4	Go to next page
F5	Refresh
F6	Display video in full screen mode
F7	Video pause
F8	Video play
SHIFT KEY + -	Slash (/)
CTRL ±	Magnification / reduction (software)
Num lock + CTRL ±	Magnification / reduction (hardware)

7.12.1 The USB Mouse or the USB Keyboard is the only USB Device

Example:

You want to use only live TV (no recordings) and therefore do not need a USB disk or you use an eSATA disk for recording, time shift, or media playback. You also use the Internet either with mouse **or** with keyboard.

➢ Connect a USB mouse or a USB keyboard to the receiver (USB interface at the rear). You can use the device now.

7.12.2 Several USB Devices

If you want to use the recording and / or time shift functions in conjunction with a USB storage device, or mouse and keyboard should be available simultaneously, you need to connect several USB devices.

1. Connect a USB hub to the USB socket on the back of the receiver
2. Connect a USB keyboard to the USB hub. You can use the keyboard now.
3. Connect to the USB hub one or several USB storage devices.

Instead of a USB mouse and USB keyboard, you can also use a wireless keyboard-mouse combination ("wireless desktop"). This has the advantage that only one USB slot is occupied.

The total power consumption of all connected USB devices may not exceed 500 mA.

8 Operation in a Unicable System

8.1 About Unicable

The HDTV receiver smartCX10/VX10 can be operated at a unicable system. Depending on the type of system it is possible to connect up to eight receivers to one trunk line.

In order to achieve that, at each receiver in the setup menu, a separate IF channel and a corresponding frequency must be set.

The allocation of channels and frequencies depends on the used LNBs or multiswitches.

The data sheet and the technical documentation for your LNB and / or multiswitch contain a mapping table similar to the following.

8.2 Allocation ZF Channels and Frequencies

Receiver	ZF channel	Example frequency (MHz)	Frequency (MHz)
Receiver 1	1	1210	
Receiver 2	2	1284	
Receiver 3	3	1400	
Receiver 4	4	1420	
Receiver 5	5	1516	
Receiver 6	6	1632	
Receiver 7	7	1748	
Receiver 8	8	1864	

➢ Fill in the last column of the table the frequencies of your system, thus you always have all the relevant information at a glance.
The rule of thumb is: maximum frequency → shortest cable path.

8.3 Installation

1. If the receiver is connected to a unicable system, start the installation as described in section 5.2, page 24.
2. Press the **blue function key** at the end of the countdown to the RAPS-install, in order to open the submenu Antenna.
3. Select the **LNB Type** *Unicable*.
4. Check whether the values for LOF Low Band and LOF High Band correspond to the used LNB (default values are 9750 and 10600). You may need to adjust the values.
5. Set the IF frequency (one of the selectable IF frequencies in ascending order for each connected receiver in the system.
6. Set the respective channel (one of the selectable channels in ascending order for each connected receiver in the system).

7. Exit the menu by pressing **EXIT** (the settings are stored).
8. Select the menu **Control Panel**, the submenu **Config RAPS** and enter the PIN code.
9. Make sure that the value for **RAPS Mode** is *Config*. You may need to change this value.
10. Press the **yellow function key** to start the RAPS installation.
11. Go on as described in section 5.2, page 24.

9 Management of USB Storage Devices

For recording, time shift and media player functions mainly USB storage devices (USB sticks, USB hard drives) are used. Therefore, their use is described below in detail.

9.1 USB Sticks

In general, USB sticks can be used. However, it must be ensured, that the read and write speed of the USB stick is higher than 12 MByte / s.

Too low read and write speed can cause problems during recording (stuttering, still images). The internal memory (buffer) is overloaded and the recording is stuttering for a moment. As soon as the data is processed in the internal memory, the recording will continue.

If the write speed of a connected storage device is not high enough for proper recording, a corresponding notification window opens.

9.2 USB Hard Drive 2.5 "(Inch)

2.5" USB hard drives are normally powered via the USB connector.

Check the power consumption of your hard drive (consult the hard drive user manual), since the smart receivers provide a maximum current of 500 - 600 mA.

If the power consumption of the drive is higher, it must be supplied with an external AC adapter.

If this is not possible, programmed recordings cannot be processed or they are defective.

9.3 USB Hard Drive 3.5 "(Inch)

3.5" USB hard drives have their own power supply.

Therefore, we recommend hard drives of this size for the operation along with smart receivers.

9.4 Check the Read and Write Speed

You can test the read and write speed of your USB storage device with various programs.

In the support section of the website www.smart-electronic.de you can find such a program to download.

The read and write speed of your storage device must be more than 12 MByte / s to ensure an error-free operation.

9.5 File System

The smartCX10/VX10 supports the file systems FAT16, FAT32 and Ext2. In addition, you can play files on NTFS-formatted disks.

9.6 Partitions on the Storage Device

The memory of a USB storage device can be split in several parts - so-called partitions.

smart recommends to partition disks with a size of 500 GB, while the partitions should be no larger than 500 GB.

Examples:

- You do not need partition a disk with 400 GB.
- A 1000 GB hard disk should be divided into two partitions of 500 GB.

Use the second (or third) partition on the disk to archive recordings. Connect the external disk to your PC and move the recordings to the second partition.

So, you have always enough disk space on the first partition, and have the possibility to clean up the first partition from time to time.

9.7 Memory Requirements for Recording

- SD recordings need about 40 MB / minute (2.5 GB / hour).

- HD recordings need about 120 MB / minute (7.0 GB / hour).

9.8 Troubleshooting USB Storage Devices

Symptom	Possible reason	Corrective
Recording jerky, still image	Inadequate read and write speed of the disk: the internal memory (buffer) of the USB stick is overloaded. Storage device/ fie system damaged	Check read and write speed Windows error checking (see next section)
Recording stops prematurely	Disk full, No more space available.	Disk cleanup, Windows disk defragmentation
Disk does not start with the programmed timer	2.5 "hard drive with too high power consumption First partition on the disk exceeds 250GB	Check the power consumption of disk, possibly using a different storage device Repartition the disk; First partition with max. 250GB
Disk is not recognized	Disk is not compatible with the receiver, unsupported file system, inadequate read and write speed Cable connection broken	Matching and tested storage devices can be found at the smart accessories store (at www.smart-electronic.de) Check USB cable
Hard drive keeps running, even though receiver is in standby	Hard drive does not support standby function	Check technical data of the hard disk

9.9 Error Checking in Windows

In the following we describe the procedure for the operating system Windows XP. If you have a different operating system, find out a possibly different procedure in the manual of your PC or operating system.

1. Connect the disk to the PC.
2. Open **My Computer** and click on the disk with the right mouse button.
3. Select Properties.
4. Go to the **Tools** tab.
5. Under Error Checking click the button **Check Now**. The window **disk check** opens.
6. Select both options (**file system errors** and **bad sectors**).
7. Start error checking and correction by clicking on **Start**.

10 Cleaning

WARNING!

Risk of electric shock!

- Pull the mains plug from the mains socket before cleaning.
- Never clean the receiver with a moist cloth.
- Liquids must be prevented from entering the unit.

CAUTION!

Risk of damage!

- Do not use any solvent-containing cleaners such as benzin or thinner.
- Clean the housing of the receiver with a dry cloth.

11 Transport and Shutdown

This is the procedure, if you want to transport the receiver or do not want to use it anymore:

1. Disconnect the receiver and the connected units from the power supply.
2. Pull all connected cables.
3. Remove the batteries from the remote control.
4. Place the receiver, cables and remote control in the original packaging.
5. Store the receiver and all accessories at a dry and dust-free location.
6. Protect the receiver from frost.

12 Troubleshooting

This section contains a list of common errors that can occur during operation of the receiver. For each error a possible cause and the recommended correction are given.

Symptom	Possible cause	Corrective Action
Display is not illuminated.	The power cable has not been connected. The main switch has not been switched on.	Connect the power cable to the mains socket. Switch on the mains switch.
No sound or picture, in the receiver display the current time is shown.	Receiver is in standby mode.	Press the power key, in order to switch on the receiver.
No sound or picture.	No signal or only a weak signal.	Check the cable connections to the receiver and from the receiver to the connected units and fasten them, if necessary.
The TV set has no picture.	The system is not connected properly. The TV set is not in the AV mode.	Check the connection of the scart or composite cable and fasten it. If necessary switch the TV set to the appropriate AV input.
Picture only black and white and/or not properly synchronized.	The video format of your receiver is not set properly.	Adjust the TV standard of your receiver to that of the TV set.
The remote control is not working.	The batteries are used up. The remote control is aligned incorrectly.	Replace the batteries with new ones. Direct the remote control at the front panel of the receiver.
The display is flashing.	Short circuit at the antenna input.	Unplug the antenna connector at the LNB input and check it. Make sure that your antenna system is installed properly.

If necessary, new operating software will be published for the receiver. It can easily be downloaded via satellite or from the website www.smart-electronic.de.

If a malfunction cannot be eliminated by new software or the above measures, please contact your specialized dealer.

Service Hotline

If you have problems with the procedures, with the connections or with general settings:

Service-Hotline: +49 (0) 7724 94 78 555

Fax: +49 (0) 7724 94 78 333

E-mail: service@smart-electronic.de

Internet: www.smart-electronic.de

13 Disposal

CAUTION!

- Never throw receiver and batteries in the normal domestic waste!

- Inquire at your city or local government about proper and environmentally suitable disposal methods for the unit.
- Take used-up batteries to a collection point.

The WEEE symbol on the product or its packaging indicates that this product is an electric or electronic unit. Do not dispose of this unit with the domestic waste, but take it your local communal collection point (recycling center).

14 Specifications

14.1 General

- HD+ compliant
- LAN connection (smart VX10: additional WLAN)
- FULL HD 1080p
- Standby Save Energy Mode
- 6000 channels
- 8 favorite lists
- EPG
- Enhanced playback: MP3, AVI, MKV, MP4, JPG, GIF, TIF, PCX

Input frequency	950 MHz ~ 2150 MHz
Input level	-65 dBm to -25 dBm
LNB current	13/18 V, max. 400 mA
LNB control signal	0 / 22 kHz
DiSEqC control	full DiSEqC support

14.2 Remote Control

Range	Up to 7 m
Batteries	2 size AAA

14.3 LAN/WLAN

LAN	10/100Mbit/s
TCP/IP	IPv4 (IPv6 is not supported!)
WLAN (VX10 only)	802.11b/g
- Speed	54Mbit/s
- Encryption	WEP, WPA and WPA2

14.4 Power Supply

Power consumption in deep standby mode	Less than 0.5 W
Voltage	175 - 250 V ~, 50/60 Hz

14.5 Connections	
Storage device interfaces	USB 2.0, eSATA
Tuner input (LNB IN)	IEC 169-24
Tuner loop through (LNB OUT)	IEC 169-24
Audio output	1 cinch socket - digital audio (SPDIF)
	1 opt. socket - digital audio (SPDIF)
	2 cinch sockets
Video output	1 HDMI socket
	1 scart socket (EURO AV)
	1 chinch socket - composite video (FBAS)
network / WWW	1 Ethernet / RJ45 socket 1 connection for WLAN antenna (only VX10)
14.6 Temperature	
Operating temperature	0° C to +40° C
Storage temperature	-40° C to +65° C
14.7 Dimensions and Weight	
Width	260 mm
Height	50 mm
Depth	215 mm
Weight	Approx. 1,5 kg

15 Open-Source-Software

The smartCX10/VX10 software contains different modules of an open source operating system, which are available according to the

- GNU GENERAL PUBLIC LICENSE, Version 2 and the
- GNU LESSER GENERAL LICENCE, Version 2.1

Both licenses have been defined and published by the FSF (Free Software Foundation).

These in CX10/VX10 used parts of the software source code can be provided free of charge upon request.

On the following pages you'll find the complete terms of the

- GNU GENERAL PUBLIC LICENSE (GPL) and der
- GNU LESSER GENERAL LICENCE (LPGL)

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Version 2, June 1991

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Version 2.1, February 1999

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That's all there is to it!

16 Declaration of Conformity

The smart electronic GmbH, Industriestrasse 29, 78112 St. Georgen, Germany declares that this product complies with the following guidelines and standards:

16.1 Hybridreceiver HD+ smart CX10

- **EMC Directive 2004/108/EC**
  - EN 55013: 2001 + A1: 2003 + A2: 2006
  - EN 55020: 2007
  - EN 55022: 2006 + A1: 2007
  - EN 55024: 1998 + A1: 2001 + A2: 2003
  - EN 61000-3-2:2006
  - EN 61000-3-3:2008
- **Low Voltage Directive (LVD) 2006/95/EC**
  - EN 60065: 2002 + A1: 2006 + A11: 2008

16.2 Hybridreceiver HD+ smart VX10

- **EMC Directive 2004/108/EC**
  - EN 55013: 2001 + A1: 2003 + A2: 2006
  - EN 55020: 2007
  - EN 55022: 2006 + A1: 2007
  - EN 55024: 1998 + A1: 2001 + A2: 2003
  - EN 61000-3-2:2006
  - EN 61000-3-3:2008
- **Low Voltage Directive (LVD) 2006/95/EC**
  - EN 60065: 2002 + A1: 2006 + A11: 2008
- **Directive on radio equipment and telecommunications terminal equipment 1999/5/EC**
  - EN 301489-17: V 2.1.1
  - EN 300328: V 1.7.1
  - EN 50371: 2002

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